ED 018 770 AC 002 440

COMMUNICATION CONCEPTS FOR DEVELOPING INCREASED COMPETENCE AMONG COOPERATIVE EXTENSION AND VOCATIONAL AGRICULTURAL EDUCATORS IN IMPLEMENTING EDUCATIONAL CHANGE. FINAL REPORT.

BY- MCCORMICK, ROBERT W. AND OTHERS
OHIO STATE UNIV., COLUMBUS, RESEARCH FOUNDATION

REPORT NUMBER PROJ-RF-2404 PUB DATE FEB 68
GRANT OEG-3-7-068932-2892
EDRS PRICE MF-$0.50 HC-$4.28 105P.

DESCRIPTORS- *COMMUNICATION SKILLS, *EXTENSION AGENTS, *AGRICULTURE, *EDUCATIONAL CHANGE, *CONCEPTUAL SCHEMES, CHANGE AGENTS, VOCATIONAL EDUCATION, EXTENSION EDUCATION, CRITICAL INCIDENT TECHNIQUE, RESEARCH, INSERVICE EDUCATION, GRADUATE STUDY, BEHAVIOR STANDARDS,

THE STUDY IDENTIFIED MAJOR COMMUNICATION CONCEPTS NEEDED BY ADULT EDUCATORS IN AGRICULTURE TO BE EFFECTIVE IN IMPLEMENTING EDUCATIONAL CHANGE. A LIST OF 175 CONCEPTS WAS IDENTIFIED FROM THE LITERATURE AND FROM COMMUNICATION SPECIALISTS. TWENTY-SEVEN CONCEPTS PASSED FOUR SCREENING TESTS AND WERE CLASSIFIED AS MOST IMPORTANT TO ADULT EDUCATORS IN AGRICULTURE. THESE MAJOR CONCEPTS WERE APPLIED THROUGH SITUATIONAL ANALYSIS OF CRITICAL INCIDENTS OF ADULT EDUCATORS IN AGRICULTURE. THIS PROCESS IDENTIFIED THE RELEVANCE OF THE CONCEPT TO THE INTELLECTUAL BEHAVIOR REQUIREMENTS OF THE CHANGE AGENT. IN ADDITION, THE RELATION OF THE MAJOR CONCEPT TO OTHER COMMUNICATION CONCEPTS WAS DESCRIBED AND THE CONCEPT WAS CLEARLY DEFINED. SUGGESTED EDUCATIONAL OBJECTIVES WERE IDENTIFIED FOR GRADUATE AND INSERVICE EDUCATIONAL PROGRAMS FOR ADULT EDUCATORS IN AGRICULTURE. (AUTHOR)

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Robert W. McCormick, Principal Investigator
Clarence J. Cummingham, Associate Investigator
Ralph E. Bender, Associate Investigator
Department of Agrucultural Education
The Ohio State University
Columbus, Ohio

February, 1968

The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent Office of Education position or policy.

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CHAPTER I

THE PROBLEM AND ITS SETTING

The vocational education departments in the public schools and the Cooperative Extension Service are educational agencies by definition and by practice.

> The Cooperative Extension Service - the largest single adult education organization ever created - came into being with the passage of the Smith Lever Act in 1914 --- By the end of World War I a strong agricultural extension service had been established in every state and the Cooperative Extension Service had become a recognized addition to our national educational system.[1]

> In fulfilling its responsibilities, vocational and technical education in agriculture contributes to the general education objectives of the public schools. This is attained through study of the application of principles of science to the prodution, processing, distribution, and servicing operations in agriculture. Vocational education in agriculture also concerns itself with the development of attitudes and abilities needed for effective leadership and citizenship.[2]

Adult educators in cooperative extension and vocational agriculture attempt to bring about changes in the behavior of their clientele. These behavioral changes may be of a cognitive, affective, or psychomotor dimension.[3] Communication becomes important and must take place in form regardless of the nature of the desired behavioral change.

Agricultural agencies, including cooperative extension and vocational agriculture, are cited as examples of effective vehicles for performing the "change agent" role in closing the gap between theory and practice in agriculture. Essentially these educators have served as the communication link between the university-based researcher and farmer practitioner.[4] However, there is ample evidence that this communication link has not been as effective or efficient with the lower socio-economic groups in agriculture as it has been with the middle and upper socio-economic strata.

In addition to the need for bringing about educational change with the clientele of cooperative extension and vocational agriculture, there is the equally urgent need to implement educational or program innovations within these educational systems. The classification schema of processes related to and necessary for educational change within a system includes as a central function the processes of diffusion. This process clearly is related to communication since the functions to be performed are to inform and build conviction about innovations.[4]

There is very clearly a plethora of research findings in the area of communication spread through several discipline areas. These models, theories and concepts can be extremely useful to educators in cooperative extension and vocational agruculture if they are synthesized into a body of the most relevant concepts and made available for the training of these educators. Bhola points out that the fund of knowledge in this area is so considerable that a synthesis of available research findings and conceptualizations is bound to be rewarding.[5]

The dynamic environment in which adult education programs in agriculture are conducted today presents a challenge to the communicative ability of professionals in the field. There is the continuing need to function as change agents in the diffusion of innovations in agriculture as well as the implementation of educational change within the adult education organization. The two major problems are: (1) adjusting to the changing dimensions of the role these educators are to play, and (2) developing the intellectual competencies needed in the performance of their role.

PURPOSE

The general purpose of this study was to identify, define, and operationalize the communication concepts required by adult educators in agriculture to fulfill their roles as educational change agents.

SPECIFIC OBJECTIVES

The following objectives were identified to facilitate the pursuit of this study:

1. To determine the anticipated intellectual behavioral requirements for future competence in communication.

2. To identify relevant communication concepts from the behavioral sciences.

3. To define and describe the concepts.

4. To develop suggested educational objectives for use in staff development programs.

BASIC ASSUMPTIONS

Several basic assumptions of this study were made.

1. In general, present cooperative extension and vocational agricultural educators need increased levels of understanding of fundamental concepts relating to communication as the basis for leading more effective programs.

2. Communication is more effective if those involved understand the basic concepts.

3. Subjective judgments made by authorities in the field of communication are valid evidence in determining priorities of relevant concepts.

4. Communication concepts do not remain static. Changing times and situations will dictate those concepts most useful.

5. There are some commonalities to all communication behavior.

LIMITATIONS OF THE STUDY

1. The procedure used to formulate the groupings of communication concepts was largely subjective in nature.

2. The study was conducted over the relatively short period of one year.

3. The audience for the study was identified as cooperative extension and vocational agricultural educators in graduate and in-service training programs.

PROCEDURE

The general design for this study was based fundamentally on the idea that in the initial step in the development of a comprehensive training program for professional workers, regardless of appropriate and valid objectives, two dimensions are paramount. First, the intellectual behavioral requirements of the job must be identified. Second, relevant knowledge required to develop the intellectual behaviors must be identified and described as the basis for the development of the training program.

Four stages were envisioned, with each stage related to the objectives of the study. These stages were: (1) the determination of the anticipated behavioral requirements for future competence in communication; (2) the identification of relevant concepts from behavioral science disciplines; (3) the definition and description of the concepts; and (4) the development of suggested educational objectives. Under each stage the proposed procedure was described, although these stages were not conceived as being discrete since there was a degree of interrelationship among the individual stages. The stages, therefore, were suggested to help achieve clarity in the procedural aspects of the study.

STAGE I. The Determination of the Anticipated Intellectual Behavioral Requirements for Future Competence in Social Change

The following procedure was projected in accomplishing the task of determining the anticipated intellectual behavioral requirements:

1. A review was made of the relevant technical, social, and economic trends in society. This was done by reviewing appropriate research reports and appropriate projections by experts in relevant fields.

2. Changes in cooperative extension and vocational agriculture was needed to be effected to cope with the technical, social, and economic trends were compiled. In order to accomplish this task, relevant reports and articles by leaders in the two fields and by other experts in governmental and educational fields were studied.

3. Based on the review, a list of anticipated intellectual behavioral requirements for future competence in communication were developed for cooperative extension and vocational agricultural educators.

STAGE II. The Identification of Relevant Concepts

The following procedure was planned at this stage:

1. The concepts relevant to communication were identified.

2. The concepts which were identified were reviewed by the National Extension Curriculum Committee at Ashville, North Carolina, August 7-9, 1967. Suggestions were given as to their relevancy to the intellectual behavioral requirements of the cooperative extension and vocational agricultural educator's job.

3. The communication concepts identified were subjected to a screening process involving the following tests:

   (a) Authorities in the field of cooperative extension and vocational agriculture were contacted and asked to check those concepts most important to their respective fields; (b) the intellectual behavioral requirements were summarized and systematically grouped -- these groups were compared and contrasted to determine the important concepts involved; (c) situation analyses were used to identify those concepts that were most evident; (d) concepts used in definitions of communication were considered; and (e) indexes of books written by specialists in communication were consulted to determine important concepts.

Those concepts that were checked in four or five of the above tests were rated as most important, those checked in three cases as being of much importance, those checked in two cases as being of some importance, and those with one or no checks as interesting possibilities that may deserve greater attention in future studies.

STAGE III. The Definition and Description of the Concepts

At this stage, the following procedure was followed:

1. Based on a comprehensive review of the literature and research in the communication area, applicable theory and knowledge were used in further developing the "most relevant" concepts. Dr. Edgar Dale, Professor of Education and an eminent authority on communication, suggested areas and references for consideration and reviewed periodically the work being done.

STAGE IV. The Identification of Suggested Educational Objectives for Training Programs

The following procedure was used at this stage:

1. Experts in the field of cooperative extension and vocational agriculture suggested a list of educational objectives for training programs based on the concept definition and relevance of the concept to actual situations.

2. Authorities in the field of communication, cooperative extension, and vocational agriculture reviewed the suggested objectives and suggested changes.

NEED FOR THE STUDY

The people in the world number about 3.3 billion and the increase in population is so rapid that by the year 2000 there will be from 5.0

to 7.5 billion, with the most likely estimate being between 6.0 and 6.5 billion. Land presently suitable for cultivation is limited to about 3.0 billion areas or 10 per cent of the land surface.

The world is composed of two drastically different sectors. On the one hand there is the "income explosion" being experienced by the developed areas, where food supplies have increased faster than population. On the other hand there is the "population explosion" in the under-developed areas. This is leading to a rapidly growing demand for U. S. agricultural products. There is also the grim reminder that in the world as a whole, two out of three people are constantly hungry.

Greater understanding on the part of adult educators is necessary to strive for the solution to this problem. Man can either, (1) control population growth, or (2) accelerate the growth in the supply of food to match or exceed the increase in the number of people. A combination of the two approaches is the most realistic

Resistance to population control comes from religious, institutional, social, and economical barriers. Crop production is limited because of economically usable land available. The land area of the Earth is around 33 billion acres, but only about 10 per cent of this area is being used for crops.[6]

One needs to recognize that agriculture is extremely dynamic and that unanticipated changes will occur. There is a need for quicker, more efficient innovations of improved methods to meet the crises with which we are faced today. Communication is a factor that will enhance or slow up this change depending upon its effectiveness in diffusing new and superior information to the producer, distributors, and consumers.

> Progress is slowed as a result of too many people saying the wrong things, at the wrong times, in the wrong ways, to the wrong people. Much misunderstanding results from faulty communication. What is needed is more people saying the right things, at the right time, in the right way to the right people.[7]

The responsibility for much of the dissemination of new information will lie with cooperative extension and vocational agriculture educators. Improvement in communication must precede controlled population and increased food supply to result in a more pleasant life for the world community.

Adult educators must be informed about and efficient in the use of new developments in media and alert to the possibilities of applying new learning experiences. More effective use of communication is needed to contribute to the whole process of social change. A close relationship exists between technical-economic change and social-political change. Communication can help teach the farmer that there are more effecient ways to do the same farm work; it can help to destroy barriers in the social structure; and it can help develop initiative and creative capacity to help the individual, the nation, and the world to accelerate economic development.[8]

The existing competencies of adult educators must be developed further if they are to accelerate the adoption of innovations among their clientele as well as implement educational innovations within their own programs. The current background of training experienced by present cooperative extension and vocational agricultural educators is inadequate for the effective performance of their assigned roles. The increased need to develop programs directed toward the economically disadvantaged accentuates the need for an improved understanding of the relevant concepts in communication.

The National In-Service Training Task Force of the Extension Committee on Organization and Policy of the Land-Grant College Association identified the following nine areas of competency as essential for a successful Extension worker: (1) understanding social systems, (2) program planning and development, (3) understanding human development, (4) extension organization and administration, (5) the educational process, (6) communication, (7) effective thinking, (8) technical knowledge, and (9) research and evaluation. McCormick states that Ohio extension agents felt they needed the most training in "program planning and development,"[10] The following statement might well express the reason for these needs:

> Blocks and frustrations must be removed. People must be studied as individuals and in group situations and their drives and motives explored. The process requires the accurate use of words to convey intended menaings and realization that persons vary in the readiness with which they receive new ideas. Those who are called innovators are always in a receptive mood. At the other extreme are the laggards who will never believe what they hear or see. In between are all the rest of us ordinary folks who need to be stimulated from one to six or eight times before we will adopt a new practice.[10]

Staff development programs which will help these adult educators develop the intellectual skills and abilities necessary for the implementation of their roles are urgently needed if adult education programs in agriculture are to remain viable. The concern with adult education programs directed toward the disadvantaged further enlarges this need. A clear conception of the objectives to be attained is essential in planning and conducting staff development programs. Tyler indicates that, educational objectives become the criteria by which materials are selected, content is outlined, instructional procedures are developed, and examinations are prepared.[11] Mager indicates that an instructor must select procedures, content, and methods which are relevant to the objectives; cause the student to interact with appropriate subject matter in accordance with the principles of learning; and finally measure or evaluate the students' performance according to the objectives or goals originally selected.[12] It is cogently clear that any effective staff development program must begin with a careful delineation of educational objectives.

> Extension workers, teachers, writers, public officials, and all other persons communicating ideas have a grave responsibility to do so with full knowledge of the power and ethics involved. The manipulation of humans through communication has been both used and abused throughout history. In the Extension Service we say our job is to give the facts and let the people make their own decisions. In arriving at their conclusions they are, however, influenced by the particular facts you have chosen to present, the way you present them, who you are, what institution you represent, and other less obvious factors. We must admit that to teach is to persuade. A reporter sees what he can and writes what his vocabularly enables him to express.[13]

The identification of educational objectives involves three fundamental areas; i.e., (1) the identification of the learner, (2) the behavioral change to be sought, and (3) the content to be emphasized.[14] Bloom points out that, "educational objectives as they have been used by evaluators, teachers, and curriculum workers are relatively specific statements of the characteristics the students should possess after completing the course or program."[15]

With reference to behavioral change, two taxonomies or classifications of educational objectives have been developed to assist educators in establishing educational objectives. Bloom and his associates have established six major classifications of cognitive behavior: (1) knowledge, (2) comprehension, (3) application, (4) analysis, (5) synthesis, and (6) evaluation.[16] The effective domain (valuing) or educational objectives has been classified by Krathwohl and his associates as follows: (1) reveiving or attending, (2) responding, (3) valuing, (4) organizing, and (5) characterization by a value or concept.[17] In both classifications, as one moves from the lower to the higher points on the continuum, the upper behaviors are described as the most complex. These two classification schemes are extremely useful to the educator in precisely identifying the behavioral change to be sought.

The content area of the educational objective also must be identified precisely and in relation to the desried intellectual behavior. Gagne, in his hierarchy of learned capabilities, suggests that concepts become the fundamental bases for complex learning. Concepts must be understood before principles can be grasped, since principles are defined by Gagne as a relationship that exists between two or more concepts. Problem-solving or strategy-using -- the highest intellectual capability -- is the application of concepts to the problems of living. In the development of intellectual skills and abilities the identification of concepts which are relevant to the desired intellectual behaviors is a highly important step in defining educational objectives.[18]

ORGANIZATION OF THE STUDY

The study is organized in four chapters. The first chapter deals with such background factors and information which have relevance for understanding and appreciating the implications of the study. The second chapter is concerned with the identification, definition, and description of communication concepts, including the related theory and knowledge necessary for the development of intellectual skills and abilities in the use of the concepts. The third chapter deals with the development of suggested educational objectives for training programs in communication. The fourth chapter gives an overall view of the several areas of the topic; summary, concuslions, and recommendations are consolidated in this chapter.

DEFINITIONS

"Communication is defined as the sharing of ideas and feelings in a mood of mutuality. It is a two-way process." Communication at its best is an interaction, a transaction, a situation in which modification of one's ideas is a logical and often necessary part of the process. Communication means getting into the other fellows shoes, and permitting him to get into ours. It means an empathic relationship, sensing the way a given idea or experience affects other persons.[19]

The term "communication" comes from the Latin word "communis," meaning common. Communication, is, therefore, a conscious attempt to share information, ideas, attitudes, and the like with others. It has to do with the way people get ideas, the process by which two or more people exchange ideas, facts, feelings, or impressions in ways that each gains a common understanding of the meaning and intent of messages. The essence of communication, then, is getting the receiver and the sender tuned together for a particular message. Good communication, therefore, is the essence of good teaching. One cannot teach if he cannot communicate.[20]

In agricultural terms, communication can be thought of as the bridge that unites the producer of information with its user; i.e., source, message, and receiver coincide with production, distribution, and utilization.[21]

Communication allows the individual to obtain information and gives him the motivation which allows him to broaden the field of possible decision.[22]

Concept - It has been found that when people are trying to solve a problem or deal with a new situation that they have some kind of image; something they have in mind as to what they are doing, a conceptualization of the situation.

A concept is something in your mind which isn't an actual reality because you are attempting to perceive things that are not obvious and are trying to get below what you can actually observe directly. Each person has a concept of a human being, a person carrying on a new behavior, his getting rewards or satisfactions. Each person has a concept about communication, a guide to understanding the communication you observe.[23] The concepts may be general enough to include specifics, but yet not a statement of relationships. It may form the basis for problem-solving; for interpreting and analyzing problems. In the final analysis, concepts form the structure of the discipline of communication.

CHAPTER II

CONCEPT IDENTIFICATION

The concept approach for studying communication from the concept standpoint was chosen because:

1. It insured that the most relevant information in communication was identified for the extension and vocational agricultural educators.

2. It enhanced the use of information from actual problem situations that were meaningful to a majority of the change agents.

3. It provided a way to approach the solving of problems in communication that have always been central to the activities of educators whether one wished to retain the status quo or encourage dynamic on-going change.

The procedure for this chapter followed the ideas suggested by Tyler[24] and Dale[25] with respect to identification and explanation of the communication concepts. The procedure includes two steps which are described in the following outline:

Step 1. The Identification Process

A list of communication concepts was developed based on an extensive review of the literature in the field of communication.

Tyler suggests that no single source of information is adequate to provide a basis for wise and comprehensive decisions about the objectives of the shcool. However, each source should be given some consideration in planning any comprehensive curriculum program. Although Tyler's description is related specifically to objectives, it would appear that it also holds relevance to the identification of concepts. The main sources of educational objectives according to Tyler include (1) studies of the learners themselves, (2) studies of contemporary life outside the school, and (3) suggestions about objectives from subject specialists.[26]

Although subject specialists were the only source used in the identification of communication concepts, there is a striking similarity between the sources mentioned by Tyler for selecting educational objectives and the steps used in screening the communication concepts identified by the author.

Step 2. The Screening Process

The communication concepts identified were subjected to a screening process.

(1) Authorities in the field of vocational agriculture and cooperative extension cooperated by identifying those concepts they considered most important to their respective field.

(2) Twenty-seven intellectual behavioral requirements developed in the study were summarized to expedite their use in the screening of the communication concepts. The twelve intellectual behavioral requirements used in this phase of the screening process follow.*

The vocational agriculture teacher or the cooperative extension agent

(1) possesses an educational and social philosophy consistent with expectations of society and authorities in adult education;

(2) understands social organization and the role of adult education agencies and is able to effectively cope with changing technological, economic and social forces;

(3) understands his role as a professional educator and his relationship to others;

(4) possesses an understanding of a theory of learning, processes of social change, and curriculum development, and uses them to assist in solving their problems through the decision-making process;

(5) understands technical subject matter appropriate to his job and is knowledgeable about reliable sources of information and actively pursues continuing study for professional growth;

(6) knows the sources of pertinent economic and social data needed to develop an educational program and is proficient in working with "lay" leaders in examining the influences of technical, economic, and social forces on society;

---

* For the complete list of twenty-seven intellectual behavioral requirements refer to Appendix A.

(7) diagnoses problems arising out of such an examination of the situation and can identify specific problem areas, and target audiences, and can formulate meaningful objectives and learning experiences to achieve the desired behavioral change;

(8) effectively organizes and develops the human and technical resources needed to plan, implement, and carry out the program;

(9) identifies and obtains the cooperation of appropriate resources by selecting channels of communication to provide stimulation for learning to occur and by obtaining the services of authoritative persons skilled in using the channels to assist in providing the needed learning experiences;

(10) maintains effective working relationships with "lay" and professional personnel providing needed educational experiences for resource persons and leaders in increasing their competencies;

(11) identifies, collects, and interprets evidence as a way of evlauating accomplishments and as a basis for strengthening and redirecting program efforts; and

(12) informs professional colleges, leaders, public officials, and his several publics of program accomplishments.

The twelve intellectual behavioral requirements listed above were grouped as follows:

a. 1, 2, 3,
b. 4, 5, 0
c. 7, 8, 9
d. 10, 11, 12
e. 3, 6, 9
f. 2, 5, 1
g. 1, 4, 7
h. 12, 9, 8
i. 1, 6, 5
j. 10, 3, 2
k. 8, 4, 10
l. 7, 11, 12

Each intellectual behavioral requirement was first compared with the other intellectual behavioral requirements in the same group to determine the important communication concepts involved. Secondly, two intellectual behavioral requirements in each group were compared and contrasted with the third to determine the important concepts.[27] Using group "k" as an example, numbers 8, 4, and 10 of the behavioral requirements were first compared then contrasted:

(8) effectively organizes and develops the human technical resources needed to plan, implement, and carry out the program;

(4) possesses an understanding of a theory of learning, processes of social change, and curriculum development, and uses them to assist in solving their problems through the decision-making process; and

(10) maintains effective working relationships with "lay" and professional personnel providing needed educational experiences for resource persons and leaders in increasing their competencies.

The communication concepts that arise when the three intellectual behavioral requirements are compared include: organization, planning, capability, skills, competencies, purpose, and participation. Those concepts most evident when contrasing the behavioral requirements include: authority attitudes, experience, thinking, social cultural system, informal, formal, content, treatment, and perception.

(3) Situation analysis was used to identify those concepts that were most evident. The situations used for the purpose of screening the concepts were those collected in a pretest of critical incidents under the direction of Alexander.[28]

(4) Concepts used in definition of communications were considered.

(5) Indexes of books, written by specialists in communication, were consulted to determine the important concepts.

Those concepts that were checked in four or five of the above screening tests were rated as most important, those checked in three cases as being of much importance, those checked in two cases as being of some importance and those with one or now chekcs as interesting possibilities that may deserve greater attention in future studies.

Further consideration was given to the concepts which were rated most important by starting with a problem situation, finding out which concepts were operating, and indicating what needed to be known about the concept to effectively use it in solving a problem

Two major questions have guided the writer in explaining the concepts listed:

(1) What is the actual problem faced by the extension agent or the vocational agriculture teacher?

(2) How is this problem related to communication?

Step 3. The Grouping Process

The communication concepts included in this study are organized according to the following pattern:

(1) An alphabetical listing of all the communication concepts considered in the study are presented.

(2) (a) The communication concepts are listed according to groups. Group one represents those concepts considered most important for use by agricultural adult educators. Concepts listed in group two are considered as being of much importance, group three as being of some importance, and group four as interesting possibilities that may deserve greater attention at a later date.

(b) Group one, two, and three have code numbers on the right side as a cross reference to the listing of the concepts in units with similar meanings. For example: "Purpose (24)" indicates that purpose found in group one can also be found in unit 24 in the listing of the concepts with similar meanings.

(3) (a) In the listing of the concepts with similar meaning an attempt was made to group the concepts into meaningful units. Words located in each of the units either represent one concept or they help support the idea intended. For example:

1. AFFECTIVE BEHAVIOR	RATIONAL BEHAVIOR
Emotion Feeling	Rational Insensitive
2. ATTITUDES Opinions	

The left column was arranged in alphabetical order according to the capitalized or first work in each numbered unit.

(b) The right column represents the opposite of most of the concepts listed in the left column. In some cases, neither side represents the extreme end of the continuum but the concepts are listed as such because they represent different points on the same continuum. In still other cases meaningful differences did not exist or did not appear to add to the explanation of the concept. In these cases the right column is blank

AN ALPHABETICAL LISTING OF THE COMMUNICATION CONCEPTS

The following alphabetical list includes all the communication concepts that were identified. This list is a result of an extensive review of the literature in the field of communication.

Ability
Abstract
Acceptability
Accuracy
Action
Adequacy
Adoption
Affective behavior
Affect
Aimlessness
Alternative
Analysis
Analogy
Anecdotes
Answer
Apathy
Applicability
Argument
Attention
Attitudes
Attractiveness
Audible
Audience
Authority
Availability
Barriers
Beliefs
Bit
Bond
Breakdown
Capability
Capacity
Chance
Channel
Clarity
Closed
Code
Collecting
Commitment
Communicator
Compatibility
Competency
Complexity
Compliance
Concept
Concrete
Conditioning
Conflict
Conformity
Connotative
Consistency
Consumption
Contact
Content
Context
Continuity
Contradictory
Control
Conviction
Cooperative
Correctness
Covert behavior
Credibility
Decision making
Decode
Deduction
Delivery
Denotative
Density
Desires
Destination
Development
Diffusion
Direct
Dissemination
Dissuasion
Distribution
Divisible
Dynamic
Effects
Efficiency
Elements
Emotion
Empathy
Emphasis
Encode
Entertainment
Error
Evaluation
Exact
Examples
Expectation
Experience
Expertness
Exposure
Expression
Facilitate
Facts
Fallacies
False
Familiarity
Fatigue
Fear
Feedback
Feelings
Fidelity
Flexible
Focus
Form
Formal
Frequency
Friction
Generalization
Gesture
Goal
Group
Habit
Hinder
Honest
Ideas
Illiteracy
Illustrations
Image
Imagination
Imperial
Impede
Inaccuracy
Inadequacy
Independence
Indirect
Individual difference
Indivisible
Induction
Inefficiency
Inference

Influence
Informal
Information
Insensitive
Instruction
Intangible
Intelligence
Intent
Interaction
Interdependence
Interest
Interpersonal Network
Interpretation
Judgment
Known
Language
Latency
Learning
Length
Linkage
Listening
Literacy
Logic
Mass
Meaning
Media
Medium
Message
Misconception
Misinterpretation
Misrepresentation
Motivation
Needs
Network
Noise
Nonconformity
Norms
Objective
Observing
Occasion
Open endedness
Opinion
Organization
Outlock
Overlap
Overt behavior
Partial
Participation
Patience
Perception
Person-to-person
Personality
Persuasion
Planning
Possession
Prediction
Preparation
Presentation
Prestige
Primacy
Problem-solving
Process
Production
Proficiency
Propaganda
Psycho-motor
Public-opinion
Publics
Punishment
Purpose
Quality
Quantity
Question
Rapidity
Rational behavior
Reading
Reality
Reason
Receiver
Recency
Receptor
Redundant
Referent
Regression
Reinforcement
Rejection
Relative advantage
Reliability
Reinstruction
Reminders
Repetition
Representation
Repression
Resistance
Response
Retention
Reward
Rigid
Role
Rumor
Scope
Selection
Sender
Senses
Sharing
Signal
Simulation
Situation
Skills
Social Cultural System
Source
Speaking
Stimulus
Structure
Style
Summary
Susceptability
Symbols
Tangible
Target audience
Taxonomy
Techniques
Thinking
Timing
Transmission
Treatment
True
Two-step-flow
Unknown
Validity
Values
Variation
Viewing
Visualizing
Vocabulary
Voice
Wants
Matching
With it
Words
Writing

GROUPING COMMUNICATION CONCEPTS ACCORDING TO THEIR IMPORTANCE

The four groups that are identified on the following pages have resulted from subjecting all the communication concepts listed to a screening process determined by

(1) asking authorities in the field of vocational agriculture and cooperative extension to identify those concepts which are most important to their field;

(2) comparing and contrasting the intellectral behavioral requirements to determine the important concepts involved;

(3) examining situations to determine those communication concepts which by their presence contributed to the success of, or by their absence contributed to the failure of the incident;

(4) considering those concepts used in the definitions of communication; and

(5) examining the indexes of books written by specialists in communication to determine the important concepts.

Those concepts that were checked in four or five of the above tests were placed in group one and designated as most important; those concepts checked in three cases were placed in group two -- or much importance; those concepts checked in two cases were placed in group three -- of some importance; and those concepts checked in one or no cases were placed in group four -- interesting possibilities.

Each of the words in the first unit to which the concept has a code number designating the unit to which that concept has been assigned in the listing of the concepts with similar meanings.

GROUP I - MOST IMPORTANT

Affective behavior (1)
Attitudes (2)
Channel (5)
Content (17)
Credibility (7)
Experience (9)
Feedback (27)
Information (13)
Interest (14)
Listening (28)
Medium (5)
Message (17)
Motivation (20)
Perception (19)
Persuasion (20)
Process (23)
Purpose (24)
Reading (28)
Receiver (28)
Response (27)
Sender (28)
Social Cultural System (29)
Source (28)
Speading (28)
Stimulus (20)
Target audience (28)
Timing (30)

GROUP II - OF MUCH IMPORTANCE

Acceptability (18)
Attention (14)
Authority (3)
Clarity (10)
Divisibility (8)
Expression (27)
Frequency (11)
Ideas (14)
Image (19)
Informal (12)
Interaction (12)
Interpretation (15)
Learning (26)
Noise (10)
Observing (28)
Occasion (29)
Participation (14)
Planning (21)
Propaganda (13)
Reinforcement (26)
Reward (20)
Role (3)
Symbols (16)
Transmission (5)
Writing

GROUP III - OF SOME IMPORTANCE

Action (6)
Apathy (6)
Audience (28)
Barriers (10)
Breakdown (8)
Capability (4)
Code (16)
Commitment (6)
Communicator (28)
Competency (4)
Connotative (17)
Cooperative (21)
Decision-making (6)
Decode (28)
Desires (18)
Destination (28)
Dissemination (5)
Dynamic (3)
Effects (20)
Emotion (1)
Empathy (14)
Emphasis (24)
Encode (27)
Evaluation (27)
Expectation (19)
Expertness (7)
Exposure (9)
Facts (25)
Feelings (1)
Fidelity (10)
Focus (24)
Gesture (16)
Indirect (12)
Influence (3)
Intelligence (7)
Known (7)
Language (16)
Latency (22)
Linkage (23)
Mass (12)
Meaning (17)
Needs (18)
Objective (24)
Opinion (2)
Organization (21)
Overt behavior (27)
Person-to-person (12)
Personality (3)
Preparation (17)
Presentation (17)
Prestige (3)
Primary (22)
Problem-solving (16)
Publics (27)
Reality (25)
Reason (14)
Recency (22)
Redundant (11)
Repetition (11)
Representation (15)
Resistance (18)
Retention (26)
Senses (5)
Signal (18)

Situation (29)
Skills (4)
Techniques (5)
Thinking (6)
Treatment (17)
Visualizing (28)
Vocabulary (16)
Words (16)

GROUP IV - INTERESTING POSSIBILITIES

Ability
Abstract
Accuracy
Adequacy
Adoption
Affect
Aimlessness
Alternative
Analysis
Analogy
Anecodotes

Applicability
Argument
Attractiveness
Audible
Availability
Beliefs
Bit
Bond
Capacity
Chance
Closed
Collecting
Compatibility
Complexity
Compliance
Concept
Concrete
Conditioning
Conflict
Conformity
Consistency
Consumption
Contact
Context
Continuity
Contradictory
Control
Conviction
Correctness
Covert behavior
Deduction
Delivery
Denotative
Density
Development
Diffusion
Direct
Dissuasion
Distribution
Efficiency
Elements
Entertainment
Error
Exact
Examples
Facilitate
Fallacies
False
Familiarity
Fatigue
Fear
Flexible
Form
Formal
Friction
Generalization
Goal
Group
Habit
Hinder
Honest
Illiteracy
Illustrations
Imagination
Impartial
Impede
Inaccuracy
Inadequacy
Independence
Individual difference
Indivisible
Induction
Inefficiency
Inference

Insensitive
Instruction
Intangible
Intent
Interdependence
Interpersonal network
Judgment
Length
Literacy
Logic
Media
Misconception
Misinterpretation
Misrepresentation
Network
Nonconformity
Norms
Open-endedness
Outlook
Overlap
Partial
Patience
Possession
Prediction
Production
Proficiency
Psycho-motor
Public-opinion
Punishment
Reliability
Quality
Quantity
Question
Rapidly
Rational behavior
Receptor
Reference
Regression
Rejection
Relative advantage
Reinstruction
Reminders
Repression
Rigid
Rumor
Scope
Selection
Sharing
Simulation
Structure
Summary
Susceptability
Style
Tangible
Taxonomy
True
Two-step-flow
Unknown
Validity
Values
Variation
Viewing
Voice
Wants
Watching
With it

COMMUNICATION CONCEPTS IN UNITS WITH SIMILAR MEANINGS

Those concepts found to be most important, of much importance and of some importance (that is, groups one, two, and three) have been regrouped into meaningful units. The capitalized words in the left column represent the opposite to most of the concepts listed in the left column. In some cases, neither side represents the extreme end of the continuum but the concepts are listed as such because they represent different points on the same continuum. In cases where meaningful differences were not apparent the right column was left blank.

1. AFFECTIVE BEHAVIOR Emotion Feeling	RATIONAL BEHAVIOR* Rational* Insensitive*
2. ATTITUDES Opinions	
3. AUTHORITY Dynamic (force) Influence Personality Role Prestige	LAXITY*
4. CAPABILITY Competency Skills	
5. CHANNEL Dissemination Medium Senses Techniques Transmission	
6. COMMITMENT Action Decision-making Problem-solving Thinking	APATHY Inactivity* Indifference*
7. CREDIBILITY Expertness Intelligence Known	UNTRUSTWORTHY* Inexpertness* Inability* Unknown*
8. DIVISIBILITY Breakdown	INDIVISIBILITY*
9. EXPERIENCE Exposure	INEXPERIENCE*
10. FIDELITY Clarity	NOISE Barriers
11. FREQUENCY Redundant Repetition	

12. INFORMAL	FORMAL*
Indirect	Direct*
Interaction	
Person-to-person	Mass
13. INFORMATION	
Propaganda	Reason
14. INTEREST	DISINTEREST*
Attention	
Empathy	
Ideas	
Participation	
15. INTERPRETATION	MISINTERPRETATION*
Representation	
16. LANGUAGE	
Code	
Gestures	
Signal	
Symbols	
Verbal*	Non-verbal*
Vocabulary	
Words	
17. MESSAGE	
Connotative	Denotative*
Content	
Meaning	
Preparation	
Presentation	
Treatment	
18. NEEDS	
Acceptability	Resistance
Desires	
19. PERCEPTION	MISPERCEPTION*
Expectation	
Image	
20. PERSUATION	DISUASION*
Effects	
Motivation	Restraint*
Reward	
Stimulation	
21. PLANNING	LACK OF PLANNING*
Cooperation	
Organization	

22. PRIMACY	LATENCY
Recency	
23. PROCESS	
Linkage	
24. PURPOSE	AIMLESSNESS*
Emphasis	Chance
Focus	Open ended*
Objectives	Uncertainty*
25. REALITY	
Facts	
26. REINFORCEMENT	
Learning	
Retention	
27. RESPONSE	
Evaluation	
Expression	
Feedback	
Overt Behavior	Covert Behavior*
28. SENDER	RECEIVER
Speaking	Listening
Visualizing	Observing
Writing	Reading
Encoder	Decoder
Source	Audience
Communicator	Target Audience
	Publics
	Destination
29. SOCIAL AND CULTURAL SYSTEM	
Occasion	
Situation	
30. TIMING	

* Concepts from group four are included here for the purpose of clarification.

EXPLANATION OF THE MAJOR CONCEPTS

Each of the concepts designated by the capitalized words in the listing of units with similar meanings was explained further according to a set procedure as follows:

1. A situation was chosen where the major concept was known to be operating.

2. An application of this concept to the situation was explained further and the relationship to other communication concepts was shown Those concepts considered to be important to the situation were underlined to facilitate identification.

3. Finally an explanation or definition of the concept was given to further clarify its meaning.

AFFECTIVE BEHAVIOR

Situation

Reuben Fritz, county agent in a midwestern state, desired to inform land owners about resources available to them for the purpose of developing a wild life habitat on their properties.

Fritz planned a very successful meeting for those persons interested in this aspect of conservation. Four specialists were present. The auditorium was literally packed and interest was very high. The meeting had to be adjourned before all the questions could be answered.

Telephone calls and letters asking for further information increased markedly. Orders received by the Agricultural Conservation Service increased dramatically. Outdoor writers used the material handed out at the meeting in follow up articles and the university published a bulletin which included much of the material used by Mr. Fritz.

Relevance of the Concept

The agent's problem was to find ways to improve wild life habitat in his county. The communication problem was to increase the awareness of resources available to help the farmer.

The word conservation in agricultural circles has emotional overtones. It is an excellent example to show the effect of affective behavior. An active response is almost assured. In conservation either the person is strongly against of strongly for a program whether it is on soil erosion, in wild life protection, or in some other aspect.

Since the subject of the above situation had to do with conservation, affective behavior was a factor which contributed largely to its success. People became emotionally involved. The source of information indicated authoritativeness and credibility. The channels of communication were used to a great extent as follow-up to the meeting itself. This repetition encouraged continued interest and involvement of personal feelings which brought about overt behavior.

Definition of Affective Behavior

Affective behavior is similar to emotion and indicates an excited state of mind that accompanies goal-directed efforts -- fear, anger, joy, disgust.[29]

Emotional reactions occur only as responses to situations and cannot be separated from the situation or experience which evokes them. Emotion, therefore, refers to a component of a complex reaction that an individual undergoes in a given situation and is characterized by (1) a marked change in the internal state of the organism, (2) awareness of the change, and (3) behavior indicative of an attempt to adjust to the given situation.[30]

ATTITUDES

Situation

A dairy plant in a southern state persuaded the county agent to hold a meeting of dairy farmers for the purpose of increasing production.

In spite of the advanced publicity only twenty-three of the 550 dairymen attended and they showed very little interest in changing their practices. These dairymen were of the opinion that they were already doing a good job and maintained the attitude that the dairy plant management was looking out for its own interest rather than for the interest of the farmer.

In another county in the same general area a county agent called a meeting of dairy plant representative to discuss mastitis control. Dairy plant representatives suggested that each plant send a letter to its patrons urging attendance at the meeting. They also planned to give some dairy products for door prizes. The county agent prepared a general letter for the plants to send. Three hundred dairymen attended the meeting eager to have some very relevant questions answered concerning mastitis control.

Relevance of the Concept

In the first case the attitude of the farmers was one of disinterest because they mistrusted the intentions of the source. The proposed content of the meeting was too broad in scope. Farmers were of the opinion that they knew more about their situation than the dairy plant management.

In the second example, the farmers attitude was entirely different because a specific phase of improved production was chosen. The interests of the farmer came first and the idea originated from a trusted, credible source.

Definition of Attitudes

The attitude of a communication source affects the ways in which communication takes place, including the attitude toward self, subject matter, and the source or receiver.[31] In the simplest sence, prestige is the attitude one person has toward another. Speakers have prestige when listeners like them, accept them as authorities, respect their judgment, and attach importance to what they say. Any speaker having prestige significantly influences listeners more than those who do not.[32]

Attitudes can be defined as a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's responses to all stimuli to which he is exposed.[33] An attitude toward any person, object, or situation is thus a tendency to respond, either favorably or unfavorably.

AUTHORITY

Situation

A vocational agriculture teacher reportedly came across an article that seemed to be the answer to a problem a farmer had expressed only a few days before. Immediately he picked up the phone and told the farmer about the article. Having had such an article brought to his attention the farmer examined it with greater interest and considered how it might apply to his siruration.

In a second case a District 4-H Council was having problems with both attendance and productivity in planning at their meetings. In a meeting of the district county agents it was decided that one agent should be encouraged to attend each District 4-H Council meeting but not necessarily to give guidance or advice. A dinner meeting was decided upon. Increased interest was immediately evident and greater effectiveness resulted.

Relevance of the Concept

In the first case the vocational agricultural teacher acted as an authoritative source to point out the implications that the information in a certain article might have to a farmer. The farmer, knowing the vocational agricultural teacher personally put more faith in the article because of the prestige he held for the vocational agriculture teacher.

The second case indicates the importance of having a person with authority present at planning meetings. His presence gave the impression of importance to the meeting.

Definition of Authority

An authority is a person who by virtue of his status, role, or recognized superiority in knowledge, strength, etc. exerts the influence through authority. Authority is pronouncement by an expert; credibility is claimed for a pronouncement because of the expertness and reliability of its author.[34]

CAPABILITY

Situation

A 4-H camp experience brought about the close friendship of a boy member and the 4-H agent in his county. The boy's father was an excellent farmer but not a supporter of extension efforts.

The agent's plans to work closely with the boy had the ulterior motive of winning the boy's father to support extension activities. Through the process of close planning and helpful supervision the boy's peanut project outyielded his father's and also won district and state awards.

The father is now an avid supporter of the extension program.

Relevance of the Concept

The agent's problem was to reach a farmer who had not been interested in the extension service. The method used to reach this person took an indirect approach. Observation of the demonstration conducted by the farmer's son persuaded the farmer that there was reason to believe in the extension program and the capabilities of its staff.

We vary in out skills of communication; we do not have the same ability to listen, to hear, to understand, to write, to read, to speak, to observe, to visualize, and to think.

For example, if we are thinking in terms of changes we want to have occur to other people, then we must know our audience, who they are, what they know, what they expect from us, with whom do they associate, and what their reference groups stand for and mean to them. It is also important that the audience know us, who we are, who we are associated with, who is our boss, what social system we come from, and is it different from theirs.

Definition of Capability

Capability is the maximum effectiveness a person can attain with optimum training. Ability implies that the task can be performed now.[35] Competency is the ability for a particular job or vocation.[36] Skill is the ability to perform complex motor acts with ease and precision, and adaptability to changing conditions. Skill is evaluated in terms of end results[37]

CHANNEL

Situation

An increase in inquiries concerning profit-making projects for small property owners prompted a midwestern county agent to investigate, with county extension staff and selected individuals engaged in specialized phase of agriculture, the possiblity of arranging a special session for this clientele.

A school to run two nights was planned. Meeting notices were sent to vocational agricultural teachers, bankers, city farmers, and all other known owners of small farms. Publicity was given via radio, television, and newspaper. The instructors, which included successful horse trainers and dog kennel operator's and growers of vegetables, berries and sod, prepared written texts for presentation. These texts were mimeographed, bound, and distributed. The question and answer period following each presentation revealed enthusiastic participation. Many problems and possibilities were singled out by these specialists as being important when considering roadside marketing, renting pasture land boarding horses and dogs, recreation farming, campsites, stet. The two meetings attracted 379 persons.

Relevance of the Concept

The agent recognized a need to help provide several alternatives to small or to part-time farmers. His immediate communication problem was one of making this audience aware of a meeting geared to their needs.

In advertising, most of the common channels for transmitting messages were used, including radio and television. The follow-up material served as a handy reference to persons wishing to check certain points related to the content and to those desiring further information. Frequency of exposure through channels used to transmit the specific information most likely to reach the target audience influenced many to attend the informative sessions.

Definition of Channel

The channel is a complete system for transmitting a signal from an input location to an output location, including the code or language used. It can be newspaper or news service or any combination of physical, organic, and social transmitting media.[38]

The choice of the channel is often an important factor in conducting the message. It can be thought of as the medium, a carrier of messages. Psychologically the communication channel is defined as the senses through which a decoder-receiver can perceive a message which has been encoded and transmitted by a source-encoder.[39]

COMMITMENT

Situation

In a central state a certain community had failed to become interested in 4-H club activities. Finally after several years of efforts that ended in failure a community leader contacted the 4-H agent with the idea of forming a 4-H club. On the night of the first meeting nine leaders and sixty-five potential members were present, full of enthusiasm and ideas. The 4-H agent worked as many of the ideas as possible into a proposed 4-H club program that would meet local needs.

In another community in the same state 4-H had also failed to become established. The 4-H agent contacted several leaders but received negative replies. However, the agent tried to establish a club in spite of the negative advice given by the school principal. The agent managed to recruit 15 members but no leaders.

Relevance of the Concept

In both communities commitment was the key to what happened. In the first case action came first from local sources, from people who had thought through the situation and had made a decision. The 4-H agent cooperated to solve problems.

In the second case there was apathy or inactivity on the part of those living in the community. The best efforts on the part of the agent were doomed to failure because of the lack of support.

When commitment is involved in communication we must consider the following questions: Who am I? What am I trying to achieve? Who else is involved? What are they trying to achieve? What are the consequences to the audience if they do what I want them to do?

Definition of Commitment

Commitment is the decision of a communicator to follow through with a message. Usually there is a high degree of motivation involved. On the part of the receiver it is a decision to accept and practice the desired behavioral action.

CREDIBILITY

Situation

In 1908--six years before the Smith-Lever Act was passed to create the Extension Service--there lived near Papillion, Nebraska, a dairy farmer named Adam Gramlich. The butter and cream produce by his 13 Jersey cows provided Adam and his faimily with the bulk of their income.

When school started that fall, Howard Bramlich, Adam's nephew, enrolled at the Nebraska College of Agriculture. In one of his classes Howard learned about tuberculosis in cattle...the health and economic hazards of the disease, how difficult it was to detect diseased animals; and the value of a new thermal test which identified infected animals before they could give the disease to other cattle.

Howard told his uncle what he had learned about tuberculosis and the new thermal test when he was home on vacation. The Gramlichs discussed the advisability of testing their Jerseys and talked it over with the neighbors. Most of the neighbors thought the test was "plumb foolish," but Adam and Howard weren't so sure. A veterinarian with the U.S. Bureau of Animal Industry, Dr. H.E.Smith, said he would do the work without charge, so Adam told him to go ahead.

There was mingled curiosity, excitement, and mistrust in the neighborhood as Dr. Smith took the temperatures of those 13 cows to establish their normal level. Then he injected a small amount of tuberculin into each cow, waited 16 hours, and again took their temperature.

Smith's report dismayed Adam Gramlich and aroused indignation in the community. He reported that eight of the cows "reacted" to the test and should be sold for slaughter.

"Bet those cows were all right until the vet shot the poison into 'em," said one neighbor. "This whole thing's a fake," said another, "anybody can see those cows aren't sick."

But Adam had more faith in the veterinarian. During Smith's visits to the farm, he and Adam had long talks. Adam learned that Smith had been a farm boy and that he knew cows and the problems of cowmen. Smith had offered ideas and suggestions that would help Adam in his dairy operation. Adam felt he was sincere and a man to be trusted.

So Adam decided to see it through. He picked three of his eight reactors at random and he and the veterinarian hauled them to a slaughterhouse in nearby South Omaha to be dressed under the eyes and knife of a federal meat inspector. Sixteen of Adam's neighbors agreed to go along.

The delegation from Paillion watched intently as the inspector opened the animals. His knife cut through gritty tubercular head glands. In one cow the tubercules were "sanded" all over the insides.

Adam was permitted to display the infected lungs and liver of his cow in a drugstore window on Paillion's main street. The weekly paper carried a statement signed by Adam and his neighbors certifying what they had seen when those three reacting cows were opened in the slaughterhouse.

This incident had a happy ending. The veterinarian was busy for quite some time testing the cattle in the Papillion area. Testing had not come in time to keep infection from spreading to eight of Adam Granlich's cows, but it was early enough to root out sources of disease in other herds. The neighbors were now glad Adam tried the test. And they now appreciated Dr. Smith's help. Once all the facts were known, the people considered them and were convinced. Testing for tuberculosis had earned public approval.

Relevance of the Concept

The problem, when realized, was an economic and health problem to Adam Gramlich. To Smith it was a problem of being able to persuade Adam that the test was reliable and the necessity for disposing of reactor cows. Effective communication was essential to solve the problem. This incident points out the importance of credibility in communication such as the necessity of expert sources (people who were intelligent, who knew what was taking place) such as the University and Dr. Smith to bring about a change in the behavior of Adam. Person-to-person consultations were also necessary to establish this credibility and confidence. Reinforcement was established through disseminating the message through several channels. Interaction with the target audience was provided. Timing became an essential factor in the acceptability of the idea. Attitudes of beighboring farmers were changed when they observed for themselves the diseased lungs and liver. Feedback came in the form of action on the part of the farmers to get their cows tested.

With extension personnel in the various counties there is no reason for farmers to wait for chance to inform them of existing problems. The extension personnel have a direct line to the source of research and can amde the latest information available to the farmer through various communication channels.

Definition of Credibility

Credibility is the compatability of a statement with accepted facts; compatability of one's perception of a situation with what is generally accepted as true or possible.[40]

Credibility can be earned by a speaker's manner. It has been found that effectiveness of delivery is significantly correlated with credibility and thus with persuasiveness. High-status speakers are consistently rated as most credible. Credibility is greater for straightforward argumentive speeches using sound evidence to support a proposition.

Two special facets of credibility are fairness and trustworthiness. Opposing arguments may or may not influence the audience as to the credibility of the speech. It depends on the audience and the position of the speaker.[41]

DIVISIBILITY

Situation

Bill Jones is a hard worker but his farming practices could be much improved. He is a poultry farmer but has not accepted the practice of raising poultry on a large scale.

John Jones, county agent, found out about his problem but realized that not all the necessary improved practices could be expected to be accepted at one time. He listed they types of improvements needed, including improved rations, increased numbers of layers, improved buildings and labor-saving devices, culling practices, record keeping and premium marketing possibilities for quality eggs.

John decided first to investigate with Bill the premium marketing possibilities, then ration improvement, and third culling. If Bill accepted these practices he would also consider increasing his flock and change some of the methods of ahndling the birds, feed, and eggs.

Relevance of the Concept

Divisibility of message content is important. John chose to start with those factors that would result in a motivation to continue to remodel the poultry enterprise. Needs and desires were considered and continual person-to-person guidance provided.

Definition of Divisibility

Divisibility is the degree to which an innovation may be tried on a limited basis.[42] It may also apply to the way material is presented, as in a sequence.

EXPERIENCE

Situation

The administrators of a vegetable processing concern announced the selection of a community in a western state for locating a branch food-processing plant. This was an area with sandy soil but was not considered a vegetable-growing area. An aggressive educational program was essential.

The anticipated market for vegetables provided an income potential to the county but there was only one small farmer with any experience in growing vegetables on sandy soil with irrigation. A grant was made available by the agricultural committee for demonstration plots with emphasis placed on potatoes. Plans were proposed for classes in the growing of vegetable crops under irrigation for the following fall and winter.

The project was climaxed with a field day held at the site of the experimental plots. The potatoes were harvested and the yield recorded. The 600-bushel yield exceeded the original objective.

Relevance of the Concept

This successful project resulted from the fine cooperation between agencies, mass media personnel, the farmer, and the professional staff. The project was well-planned, timing was right, authoritative personnel were consulted, and a concentrated program with an experienced farmer was launched. The practice was divided into meaningful steps of first encouraging production and second holding classes to encourage the use of the best practices. Once exposed to vegetable farming the possibility of financial rewards acted as a stimulus to later adopters.

Definition of Experience

Experience is actually living through an event or events. Experience is not static; it connotes activity, process, happening, doing.[43]

FIDELITY

Situation

In a chruch service a baby cries; in giving a demonstration someone in the back row tells a joke; an accident occurs outside the classroom window; someone speaks to you while you are in deep thought; a new set of symbols hits your ears while traveling in a foreign country; you are unfamiliar with the customs, norms, and experiences of those around you; you cannot express what you are thinking in the words you have at your command; the medium being used is not appropriate for the desired message.

Relevance of the Concept

All these incidents constitute barriers in communication. They are commonly referred to as noise. Fidelity is the opposite of noise. Barriers distract from the intended message much as a scratched record distracts from the quality of music which was recorded.

The more these barriers can be eliminated the greater the fidelity in communication.

Fidelity in communication can be increased by keeping the attention of the audience, making the message interesting, using different media, allowing for audience participation, and preventing too much redundance or repetition.

Definition of Fidelity

Noise can be thought of as sound that distracts, as messages that interfere with other messages, or we might broaden the definition to include factors in each of the ingredients of communication that can reduce effectiveness.[44] It is the difference between input and output.

FREQUENCY

Situation

Walter Smith, county agent in a southern state, planned to work with as many people as possible in an effort to teach the latest methods of weed control. Machinery dealers planned farm machinery displays, especially spray equipment. Several leading farmers were asked to talk to their neighbors to encourage attendance at a previously planned meeting. Four-minute programs and radio spots were used to encourage participation; newspaper articles and circulated form letters added to the publicity of the program.

State extension personnel from agronomy and agricultural engineering were the main figures at the meeting. They used charts, slides, and demonstrations in their presentation. The number attending, 186, was considered good.

Relevance of the Concept

Frequency will not solve all the problems. Some repetition or redundance is important but too much may work in a direction opposite to that which is desired, in which case the message being transmitted becomes noise to the receiver. Variation in repetition is essential. Not only will the message reach more people by using several channels, but if a message is seen and heard through several channels people begin to feel it to be important.

Definition of Frequency

The number of times a given phenomenon occurs.

INFORMAL

Situation

Don Stark, a dairy farmer, had a problem keeping the bacteria count down in his milk. Don's son discussed the matter with his vocational agriculture teacher. The teacher had to decide how much of his busy schedule could be devoted to helping solve the problem.

Relevance of the Concept

What was the situation in this informal contact? How much education did Don have? Does he take seriously the information his son brings home? What channel should be used? Will a personal visit be required or will a bulletin on the subject be sufficient?

A combination of several techniques may prove to be most effective. A discussion and decision-making effort in class, a bulletin sent home with the son, and a follow-up visit to the farm two or three weeks later may have been sufficient to solve the problem.

Definition of Informal

Any person-to-person contact is generally considered to be informal. The use of mass media and meetings on a large group basis with little chance for feedback can be thought of as being more formal.

INFORMATION

Situation

Ray Wetstone, a county agent in a midwestern state, was consulted to help set up farm records for a partnership. The partnership was initiated by the father with little consultation with his three sons and an attorney. Ray Wetstone pointed out some specific problems in regard to the partnership. He supplied the members of the partnership with helpful information but the father did not see the need for a more complete explanation of the relationship until one of the partners was killed in a car accident. Now both the widow and the father have lawyers to try to resolve the problems.

Another case in the same state shows a successful application of information received through the Cooperative Extension Service to initiate a father-son partnership. The farmer consulted the county agent who in turn gave information and helped in the detailed planning. The final draft was prepared by an attorney on the recommendation of the agent. Later years brought with it some changes in the arrangement to the satisfaction of all concerned.

Relevance of the Concept

The problem facing the county agent was to supply information to the farmer for setting up a working partnership with his sons. The communication problem was one of creating the feeling of need for information in the minds of those concerned.

These illustrations show how different people will use the same information in different ways. The first father felt he was an authority in his particular situation and that the information provided by the agent was just so much propaganda with little or no value. The agent's hands were tied because the father was not ready to change.

In the second case the attitude of the father was greatly different. The father in this case desired the best possible relationship with all participating partners. He used the information.

Definition of Information

Information is the knowledge of facts gained through investigation, observation, study, or instruction.

Information can be thought of in several different ways. Some people use information to support their own biases, to gain desired ends, or they ignore it as either being irrelevant or out of date. Others will take the same information and apply it to their situation to the betterment and satisfaction of all concerned.

INTEREST

Situation

The Department of Agriculture in the State of Goias, Brazil, was interested in increasing the protein content in the diet of rural residents by encouraging them to replace their low-protein bean with soybeans

One change agent consulted with the 4-S (similar to 4-H) executive concerning the possibility of serving a meal of rice and soybeans to the parents of the 4-S members at the annual achievement day. The 4-S leaders helped prepare the meal. All 4-S parents were invited to the meal and the general public was invited to the evening program.

The meal was served; parents were enthusiastic about the soybean substitute. Some parents indicated that the taste was superior to the ordinary beans. The general public was told about the meal during the evening program. In the weeks that followed requests for soybean seed were received daily.

Relevance of the Concept

The problem to the agent was to *interest* rural Brazilian residents in growing and using soybeans. The communication problem was one of creating *interest* in a new crop. Since this was a new food crop, *attitudes* of *resistance* had to be changed. *Apathy* to active *participation* was also important. *Interest* was created through the *sense* of taste. The *response* was immediate. The *target audience* chosen for the experiment--parents of 4-S members--was *empathetic* to new *ideas*. *Participation* was an empathetic to new ideas. Participation was an important ingredient. *Verbal* evidence that followed was encouraging but the *concrete action* demonstrated the success of the communication effort.

Interest can be enhanced by using common experiences as *focal* points. One specialist thought of the *idea* of using the characters from the newspaper script "Peanuts" to *gain attention* and increase *interest* in the message being transmitted

Definition of Interest

The very act of listening depends upon the listener's interest in what is being said. Experience with a subject creates interest in it. Nautral factors of interest include animation, vitalness, familiarity, novelty, conflict, suspense, concretness, and humor.[45]

Interests are of concern in education, both as ends and means; that is, as objectives and as motivating forces in communication with experiences to attain objectives.[46]

Interest is an attitude or feeling that an object or event makes a difference or is of concern to oneself. The basic requirement of learning experiences designed to develop is that they enable the student to derive satisfaction from the area of experience in which the interest is to be developed.[47]

INTERPRETATION

Situation

An adult farmers group was meeting weekly for the purpose of increasing efficiency in farm management and record keeping. A farm situation was presented. Each member in the group was to examine it, make decisions as to what he would do, and make the necessary entries in the farm account book.

During the early stages of the course all farmers were required to begin their own farm records, following a similar procedure. Problems were discussed in class each week along with decision-making pro lems.

Relevance of the Concept

Much of the material received by farmers in the form of publications (newspaper articles, magazine articles, bulletins, and radio programs) does not hit upon a responsive cord because the farmer is insensitive to the application in his particular situation. A representation is a first step but it might need further explanation or interpretation.

The county agent and vocational agricultural teacher alike serve as interpreters of research information to their clientele. Further interpretation of this information may be necessary for the target audience.

Definition of Interpretation

Interpretation is describing, formulating, or reformulating something in familiar terms--finding or explaining the meaning or significance of raw data.[48]

LANGUAGE

Situation

One evening a group of Americans were having a meal just before bedtime. One Brazilian was in the group. The subject of conversation was the importance of learning the language of the host country in order to effectively communicate. Wesley Archibald, who had lived in Brazil for 46 years, said he would demonstrate. He motioned to the Brazilian, Sr. Paulo, and stated, "It's time to go to bed." No response. "It's time to go to bed," still no response. A little louder this time, "It's time to go to bed," a very puzzled look came over Sr. Paulo's face while the rest of the group grinned. This time real loud, "It's time to go to bed," still no reaction to indicate that Sr. Paulo understood. Finally, Wesley put his two hands together, placed them near his face, titled his head and shut his eyes without speaking a word. A sudden glitter appeared in Paulo's eyes--he understood.

Relevance of the Concept

Language is more than words and certainly far more than English words. Gestures have meaning, but to converse freely other signals are needed to support gestures.

Among the problems of language is the "clear only if known" fallacy. Pick up any dictionary and look up almost any word and see what is given as a definition. You will know what the word is and know what it means provided you know what the words in the definition mean. Dictionary definitions are the substitution of one set of symbols for another, and if you don't know what the second set means, you don't know what the first set means.

Definition of Language

Language is the ability of a man to communicate by a semantic communication **symbol** system. Our facility in handling the language code affects our ability to encode thoughts as well as the thoughts we have. More specifically, the words we command and the way we put them together affects (a) what we think about, (b) how we think, and (c) whether we are thinking at all.

Language is a type of coding which is defined as putting ideas into a meaningful group of symbols which express the source's purpose in the form of a message.

MESSAGE

Situation

Did you ever try to tell a foreigner what vocational agriculture or extension is all about, or that the comic strip "Peanuts" is funny, or that all Americans are not rich?

What does your clientelle know about your organization? Does it really matter whether you tell them you represent the University, or Cooperative Extension, or County Extension Service?

The meaning is not really a part of the message. Meaning is a property of people, not words and things. What difference does it make what words you use to explain your point, so long as you get the point across? When speaking about poor countries, underdeveloped, have not nations, developing, under-privileged, poor, deprived nations, are approximately synonymous terms but some persons from these countries may be offended if certain of these terms are used.

Relevance of the Concept

The above example serves to illustrate that in sending a message it is not good enough to assume, "I know, why shouldn't they." All the affecting variables are important considerations such as experience, social cultural system, level of education, needs, perceptions, interests, motivations, attitudes, positions, and goals.

Definition of Message

Message is that part of a person's behavior which is perceived by another as having implications or meaning for him.[49]

"In human communication, a message is behavior available in physical forms -- the translation of ideas, purposes, and intentions into a code, a systematic set of symbols.[50]

We define a message as the actual physical product of the source encoder. When speaking, the speech is the message. When writing the writing is the message. When painting, the picture is the message. When gesturing, the movements and expressions are the message.[51]

NEEDS

Situation

A young farmer came to the county extension office to inquire about information concerning the building of a new dairy barn. The agent suggested that he visit several relatively new barns during chore time to get some idea of what was available and what might be expected. The agent held conferences with the farmer and his wife. Finally a complete set of plans was drawn that included the farmers ideas and the latest recommendations in barn design. These plans were taken to a competent contractor who gave his additional advice and built the barn.

Relevance of the Concept

In this example the farmer had a basic need that resulted in action to find out information. The problem to the county agent was to help this farmer find the best plan for his enterprise. The communication problem was one of continuing action. The agent, on a person-to-person basis, helped follow through with the plan. It was necessary to consult a credible source to obtain the best information and first-hand experience. Observation of other barn designs was important in the communication effort.

Definition of Needs

A need is the lack of something which, if present would further the welfare of an individual. Anything that is requisite to the maintenance of a state of affairs is a need. Hence, needs represent an imbalance or lack of adjustment between the present situation or status quo and a new or changed set of conditions assumed to be more desirable.[52]

When we need to understand -- when we are curious, when we seek information touching on a problem that vitally concerns us, when we crave social enjoyment, when a subject is related to our particular hobbies or interest -- we are stimulated to attention.

PERCEPTION

Situation

The agricultural committee of the Chamber of Commerce in a southern state asked farmers, county agents, and vocational agricultural teachers for suggestions to strengthen its agricultural program. Of the suggestions received the weigh-a-day-a-month dairy production record keeping program took priority. The agricultural committee sponsored the program with the cooperation and financial support of other interested agencies. An intense publicity program commenced, to interest farmers. The program was an overwhelming success.

Another agent in a neighboring county believed the weigh-a-day-a-month program was a logical way to gradually have more dairymen cooperate with the Dairy Herd Improvement Association. When the plan was presented to the County Dairyman's Committee there was little enthusiastic response. The agent went ahead with the mass media publicity but the results were disappointing.

Relevance of the Concept

In the first case the farmers perceived a need to become more efficient milk producers. The change agent perceived the need to disseminate the proper information and encourage farmers to participate. Because of previous contact and information regarding the program, farmers cooperated in the program to imporve culling and feeding procedures. Expectations were high because previous experience of programs conducted by the Chamber of Commerce helped build a image of success.

In the second case farmers did not perceive such a program as being necessary for their particular needs.

One specialist based his perception of his audience's background experience and knowledge concerning dairying by asking three questions:

(1) How many farmers in the audience are producing grade "A" milk?

(2) How many grade "B"?

(3) How many grade "C"?

Based on the reply of these questions this specialist adjusted his presentation to fit the needs of the particular audience.

Definition of Perception

The signal of a communicator is meaningless to another if it cannot be perceived. In every communicative act, the communicator and receiver share of common background of knowledge which they have acquired over the years through perception. When you speak to another person you depend upon his having a general knowledge of life.

1. We perceive best what we are prepared to perceive.

2. We can improve our efficiency as perceivers by giving attention to conditions which surround the act of perception and by acquiring good habits of perception.

3. The more we involve our sensory equipment in the act of perceiving, the deeper will be the impression we gain through perception.

4. All perceiving requires structuring by the mind to make that perception meaningful; hence, the more assistance you can give your mind to this task of structuring the more efficiently your mind can perceive.

5. Our senses sometimes mislead us; hence, we must guard ourselves against sensory distortion.

PERSUASION

Situation

J. L. Clark, an agronomist and county agent in Ohio, could see the need for increased emphasis on fertility as a means of increasing income. Very little had been done before Clark came to the county. He began an intensive program with a large number of commercial farms, fertilizer dealers, farm suppliers, vocational agriculture teachers, bankers, the Production Credit Association, and various committees throughout the county.

The first phase of this program included a drive for soil samples over a two-week period. Tools for taking samples, soil sample boxes, and information on sampling were made available at key locations in the county. The number of samples received increased from 250 to 1000 in one year.

A similar increase occured in a Mississippi county where the county agent began the program with a survey of the effects of using soil test recommendations on crop yields. Publicity for a soil testing drive was subsequently based on this survey information and used in news articles, on radio and television, and given to farm supply and fertilizer dealers for use in their publicity programs.

Relevance of the Concept

The program of the extension agent was to show how soil sampling could lead to increased profits. The communication problem was one of persuasion. That is, farmers already knew of the existence of soil testing, however, their indifference to its importance had to be replaced with a desire to meet an existing need.

The program was planned, with persons of authority acting as reinforcing agents. The objective was clear. Several different channels were used to disseminate the information. Increased profit acted as a stimulus to motivate the audience. Information and equipment were readily available.

Definition of Persuasion

Persuasion is the process of obtaining another person's adoption of a course of action, or his assent to a proposition, by an appeal to both feeling and intellect.[55]

The long-run effectiveness of a persuasive communication, however, depends on the willingness of the receiver to show the desired response and continue to maintain this new behavior in spite of pressures to pull or push him into making undesirable responses.[56]

In the case of persuasion communication, motivation to accept or to reject becomes a major consideration, and may sometimes even influence the degree of attention and of comprehension.[57]

PLANNING

Situation

A community in a southern state did not have a service for grinding and mixing feed along with marketing corn. The agent perceived this as a need but decided to consult business men and key farmers regarding the proposal. This was done and information on corn production, number of farmers to be served, volume of business that could be expected, and cost of the needed facility were studied by the agent.

Two separate meetings were called. The first involved extension personnel explaining their proposal to the Board of Directors of the County Cooperative. The second meeting was held for farmers and business and professional people to inform them about the proposal.

Relevance of the Concept

The problem for the extension agent was one of supplying a service to farmers that would satisfy a need that he perceived. The communication problem was to plan the communication so that through the cooperation of all involved the innovation would be acceptable.

Consulting farmers regarding their desires and needs was important.

Gaining the approval of the county cooperative increased the importance of the idea. Organization for action and cooperation was accomplished by giving honest interpretation of information and timing the innovation to meet a newly felt need.

Definition of Planning

A scheme of action: a way, proposed to oneself or other, of carrying out some intention.[58]

PRIMACY

Situation

On a demonstration farm near an interior village in Goias, Brazil, many crops were being grown, some for the first time. Invariably when a crop showed up well after the first trial year requests for seed were high. If the crop yield was poor the first year, regardless of their success in subsequent years, new crops were adopted much more slowly.

Relevance of the Concept

Primacy is important in the communication process. The above situation serves to illustrate that first impressions are often lasting and difficult to alter. It would seem that first contact in communication should be such as to guarantee approval and success with the audience.

Recency is also important when we wish some kind of action. How close to the time of the intended behavioral change have the instructions been given?

The bulk milk cooler might be thought of as an innovation where latency is an important factor. Because of the need for full adoption, cost, and commitment to the dairy industry for years to come, a decision of this nature will be made only after an incubation period of thinking and evaluation.

Definition of Primacy

First acts in a series tend to be better learned and to show special resistance to forgetting.[59]

PROCESS

Situation

A vocational agricultural teacher in a midwestern state saw the need for disseminating horticultural information. He discussed the possibilities of organizing an informal men's garden club with several interested persons engaged in some aspect of horticulture. The club grew to a membership of fifty-seven in just over a year. Each meeting was designed to give these men greater knowledge on some phase of horticulture.

Relevance of the Concept

In communication we are concerned about a process as it relates to who says what through what channel, to whom for what purpose, and with what effect. The source, encoder, message, channel, decoder, and receiver are the most important elements in the process.

In this informal situation the vocational agricultural teacher and the experienced horticulturists acted as the sources of information. They had previously planned what their topic was to be. The message was on some phase of horticulture. The channel involved sound waves and other media. Printed material, spoken words, visuals, and demonstration were effective. The target audience included those persons interested in horticulture. The purpose of the club was to improve knowledge, skills, and abilities in the field of horticulture.

The influences on the elements making up the process will greatly affect the intended outcome. For example, we might think of a situation in which the vocational agriculture teacher approved of planting dwarf apple trees, the audience also considered it a sound practice, and the audience considered the vocational agricultural teacher an authority in the field. This illustrates closely the case cited above and we naturally expect good results. However, if the vocational agriculture teacher were against planting dwarf trees, the audience was neutral about the practice but they considered the agent an authority then the outcome might be quite different. Also, take the case in which the vocational agriculture teacher approved of dwarf tree planting, the audience did not consider it a good practice and they also did not consider the teacher an authority. Again the result would be different. Process and the effects upon it are important.

Definition of Process

Process has been defined as any phenomenon which shows a continuous change in time, or any continuous operation or treatment.[60] By examining the various parts of the process we are faced with the problem of stopping the action much like a photograph shows only a split second of what actually took place.

PURPOSE

Situation

A professor of soils at a major land-grant university asked a county agent if he would be interested in working intensively with four young farm couples. The agent accepted the challenge enthusiastically.

The program was explained to the agricultural committee and four couples were selected in four separate areas of the county. The agent visited the four families to explain the program and later they came to the county office for further briefing by a supervisor of the Tennessee Valley Authority. These families chose to take part in the five-year program and each family took soil samples, worked out fertilizer recommendations, tested their dairy herds, kept farm records, and developed proposed building and expansion plans. As a result of this program these farmers have become leaders in their communities and supporters of the Extension Service. One farmer said, "TVA and the use of these farm records made a business of my farming operation and a business man of me."

Relevance of the Concept

The purpose of the communication was well clarified. The objective of the agent was to work with four young farm couples on a TVA program to be used as a demonstration to the community.

The agent himself was stimulated to try this work. The four farmers were also motivated by realizing the benefits that might accrue. The emphasis on close interaction, the person-to-person technique, resulted in the acceptability of the message by the target audience. The TVA supervisor was an authority on the subject and both the university and the agent were credible sources of information. The focus on four farmers and their cooperation and participation served to produce the best possible program for all those involved.

Definition of Purpose

Purpose is defined as the goal of a creator or receiver of a message, rather than as the property of the message itself. Communication purpose must be consistent with itself, expressed in terms of human behavior, specific enough to relate it to human behavior, and consistent with the ways in which people do communicate.[61]

It is the aim, end, goal -- that which a person sets before himself as the end to be attained by action.[62]

REALITY

Situation

A county agent was interested in making farmers aware of the importance of weed control. He received the cooperation of three farmers. The farmers helped to stake out three areas in their crops and had them sprayed with a recommended chemical. The results were dramatic and the plots served as excellent demonstration areas, resulting in opportunities to inform others concerning the practice.

Relevance of the Concept

The problem to the agent was to create an awareness of the importance of weed control. The communication problem was one of finding the best way. A demonstration was set up so the results could be observed. Here was something real, including facts and tangible evidence of what could be done. Little more was needed to get the message across.

Definition of Reality

Reality is the quality of being true to life, fidelity to nature--existing or happening, actually true, objectively so; not merely seeming, pretended.[63]

REINFORCEMENT

Situation

One evening a group of farmers who had contracts to plant rice on the agricultural demonstration farm in the state of Goias, Brazil, met to discuss any questions they might have and to receive information regarding the best practices to use. All of the land was to be prepared at the same time. These farmers were asked when they wanted the land ready for planting. All were silent for a moment while each person thought over his work schedule. One farmer finally indicated that we should wait for almost a week since at that time the moon would be right for planting. This statement immediately began a discussion that brought out many strong opinions with evidence to support their particular beliefs. Each person went away with his attitude reinforced. If he believed in planting by the moon he was more convinced than ever, if not it became even less important. Those that did not have an opinion may have changed their attitudes somewhat according to whom they perceived as being an authority on the subject.

Relevance of the Concept

In this particular instance only a few days were at stake and it mattered little if they planted immediately or waited. The overlying belief, however, was one that could very well slow down progress. How could one convince the people that the moon theory was nothing by a myth?

Discussing the matter served to *reinforce* both camps. A more *realistic* approach had to be decided upon. Several farmers were asked to plant before the moon phase while others waited. The results were not significantly different. The experiment served to *reinforce* the opinions of those who didn't believe anyway; it had some effect on those who were neutral but did not *persuade* the old die-hards who needed more *concrete* evidence.

We might conclude by this example, also supported by studies conducted by Klapper, that you can probably selectively reinforce existing *attitudes*, but on the *receiver's* basis of selection and not yours--they will pay *attention* to things they want to pay *attention* to and won't to things they don't want to. You can sometimes develop new *attitudes* when *attitudes* toward things don't exist. You can rarely change *attitudes*.[64]

Definition of Reinforcement

Reinforcement is the strengthening of something by adding to it; or that which strengthens when aded.[65] Any stimulus is a reinforcer, positive if it strengthens the behavior when present or negative if it strengthens the behavior when present or negative if it strengthens the behavior when withdrawn.

RESPONSE

Situation

The demonstration farm in Goias, Brazil, used fertilizer on a rice crop. This land was formerly pasture land capable of supporting one animal per ten acres. By using the recommended amount of fertilizer the rice yielded an excellent 40 bushels per acre.

Just seven years after the first trial, several people stated that everyone in the community either was using or would like to use fertilizer on all their crops. Some could not obtain enough money to buy the fertilizer.

Relevance of the Concept

The purpose of the demonstration was to prove the value of fertilizer in crop production. Based on the results an educational program was started to encourage its use. The *response* over a period of seven years was good. After being *exposed* to the new practice people began to *evaluate* its utility after which *feedback* demonstrated their *desire* to *adopt* it to their situation.

Definition of Response

Response is anything that the individual does as a result of perceiving the stimulus. An overt response is an observable, detectable, public response, while a covert response is a private one that occurs within the organism.[66] One principle that affects the amount of response indicates that the individuals respond most readily when they are highly involved in the purpose of the communication.

Feedback is a type of circular interaction to describe the effect on the speaker of the responses of his hearers, the consequent reinforcement or motivation of his own communicative behavior, and its subsequent effect upon the hearers.

Feedback, therefore, represents that flow of communication by overt physical response back to the speaker. As the listeners respond to a speaker they may frown their disapproval, smile or nod their moderate approval, or vigorously applaud or shout their enthusiastic approval.[67]

SENDER

Situation

Radio, television, newspapers, still pictures, motion pictures, demonstrations; all are channels through which communicators send messages to the public. From the flashing neon lights to the printed newspaper, all of the media attempt to gain the attention of an audience for widely different purposes. It may be to buy, to inform, or to entertain.

Relevance of the Concept

The sender uses different methods to convey the message from the source to its destination. He encodes his thoughts and sends the message by speaking, visualizing, and writing.

Whereas producing messages involves writing, speaking (including media), and visualizing (including plastic art), consuming messages involves reading, listening, and observing.

No matter how important the speaker's message, or how strongly he feels about it, it is the complex beliefs and attitudes of his listener with which he must deal. Communication does not have to be verbal. The invention of the camera represented a great leap forward in the technology of communication because of the illusion of reality which th the photograph conveys. Actually the photograph is simply another symbol, as the printed word is a symbol. However, the viewer believers that he is not being told about something as someone else saw it, but is experiencing it himself.

More than 90 per cent of our communication is accomplished with words. Our day is filled with chats, discussions, inquires, replies to inquiries, explanations, telephone calls, and interviews.

In speech the symbol that is you--your appearance, background, voice, personality--stands open for fullest scrutiny.[68]

Observation is an alert, continuing, and creative kind of perception that comes noticably to all of us. All men and women observe as all men and women think. As in thinking, some men and women observe with greater intensity and better control and develop keen powers of control.[69]

Definition of Sender

All human communication must have some source or sender, some person or group of persons with a purpose, a reason for engaging in communication.[70]

Encoding is important and can be thought of as the process of translating everything that lies behind a particular communication effort into a written, spoken, and/or visual code in such a way that the audience can understand.[71]

RECEIVER

Situation

John Riddle, a very skilled operator of a large beef-producing enterprise, desired to increase the feed efficiency of the steers he was raising. He was already doing an excellent job of feeding and because of his specialized education (B. Sc. in Animal Science) and managerial ability the county agent and vocational agricultural teacher could not offer much constructive help except to provide him with the latest bulletins and references in the field.

In an enterprise where John Riddle was trying to learn how to save a pound of feed for each hundred pounds gain, more specialized sources had to be consulted. This particular farmer spent much of his time searching out information at the state university and consulted specialists in the field of nutrition and animal science.

Relevance of the Concept

In this case the county agent could not adequately meet the need of John Riddle as the only source of information, but he was able to encourage John to study the books which the experts were studying and dig out his own information. More authoritative sources are needed. This farmer, as a receiver of information, was interested in reading the best books, listening to top specialists, and observing the top beef feeder operations in the country.

Definition of Receiver

All human communication must have some source, some person or group of persons with a purpose, a reason for engaging in communication. The person or persons at the opposite end of the communication, the target of communication, are the receivers.[72]

SOCIAL CULTURAL SYSTEM

Situation

The story of the Los Molinos water boiling project illustrates the importance of social and cultural systems. Traditionally, water was carried from one of three sources: a seasonal irrigation ditch, a spring, and a public well. All showed contamination when tested.

It was not feasible to install a sanitary water system but the incidence of typhoid and other water-borne diseases could have been lowered by boiling water before consumption. Nelida, a change agent, was stationed in Los Molinos for two years during which time she devoted almost full time to this project. After two years of effort only 11 families boiled water regularily. Of those persuaded many were associated with a different culture.

The reason for the failure of the water-boiling compaign can be traced largely to the cultrual beliefs of the Los Molinos people, particularily their custom dealing with hot and cold foods and illness. Boiling water made it less "cold" and, hence, appropriate only for ill persons. But if one were not ill, he was prohibited by the cultural norms from drinking boiled water.[73]

In a Spanish-American farm community in New Mexico hybrid seed corn was introduced. Great care was taken to insure its success. In test plots the first year the hybrid seed yielded three times the normal harvest expected from the old varieties. The next year, half of the farmers adopted the hybrid seed. But two years later nearly all had returned to planting their original varieties.

Why did the village farmer discontinue the new idea? Because their wives did not like the hybrid because it had a strong flavor when made into tortillas.

Relevance of the Concept

In the situation above two improved innovations failed because social and cultural norms were not adequately considered.

> We have learned the pleasing truth, that society talks back. Even the small-scale, technologically inferior people of the world have tremendous powers to resist changes they do not want, and to adhere, often at great cost, to their valued and distinct way of life. At the same time, we have learned that changes which people desire, radical or not, can be made swiftly, without great cost, and that a society may nearly redo itself in a generation--if it wants to.[74]

All the essentials for effective communication can be present (source, message, channel, receiver) with the highest possible efficiency of all except for harmony in social cultural systems, and the innovation can still be doomed to failure. Change must begin in this instance at changing the barrier as set up by norms of society.

Definition of Social Cultural System

A social cultural system is the pattern of relationship found in society, especially the pattern between subdivisions based on differences in age, sex, kinship, occupation, privilege, and authority.[75]

TARGET AUDIENCE

Situation

James Powell, county agent in a western state, wrote a general news article on trends in dairy cattle housing. As a result of this article at least one dairy farmer contacted the agent for further assistance in converting a loose housing unit to a free-stall housing unit.

The farmer, Paul Kemp, made plans with Powell to visit several farmers with free-stall housing. Building suppliers were contacted regarding costs, specifications, and alternatives. Powell made a farm call and the alternatives were discussed. Kemp selected a plan that would be satisfactory and used his own labor and materials. Besides an economically feasible solution this turned out to be a teaching-learning situation for the agent and the farmer and a demonstration project for the community.

Relevance of the Concept

The problem to the county agent was to help a farmer obtain and put into use satisfactory dairy housing. The situation indicated a specific audience. The focus was on one person. The original article was intended to reach most dairy farmers; the follow-up was meant for those who wanted further information. The article may have been responsible for motivating this individual. His reading the article resulted in a desire for more information.

The source must keep the receiver in mind at all times. He chooses codes that the receiver can understand. He selects elements from the code that will appeal to the receiver and that are easy for him to decode. The source must structure the elements to minimize the effort required to decode and interpret the message. He chooses content that will convince the receiver and that will be pertinent to his interest and needs. Finally, the message is treated in order to achieve the maximum effect to accomplish the purpose.[76]

Eisenson points out some of the more important variants that must be kept in mind in thinking about the audience. What is the significance of the subject for the audience? What does the audience know about the subject? What beliefs or prejudices does the audience have about the subject? What is the attitude of the audience toward the subject? What is the speaker's specific purpose in discussing the subject? What time is available for discussing the subject?[77]

Definition of Target Audience

Target audience can be thought of as a specific audience that transforms a specific signal into a message.

TIMING

Situation

A county agent in a midwestern state was consulted by a farmer regarding a disease problem in his tobacco crop. A pathologist at the state university identified the disease as black root rot.

The agent used this situation to organize a program in cooperation with the state supervisor and a recognized plant pathologist. Several varieties of tobacco were grown on the same farm where the diseased crop had been grown. This demonstration impressed many people. The director of the Farm Bureau cooperated by including the demonstration as part of a field day. Pictures were taken and published in newspapers and magazines. In two years the county tobacco growers had completely changed to recommended varieties, resulting in an estimated $6000,000 a year increase of income to the county tobacco farmers.

In another case, a county agent in a southern state felt increased profit could be realized by farmers if they began growing tomatoes. Several farmers showed interest but a bad stand and cold weather resulted in a poor crop. There was no further interest on the part of the farmers in succeeding years.

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Relevance of the Concept

In the first example, diseased tobacco caused tremendous loss to tobacco farmers. Recognizing the need, the county agent had to choose the best channels and techniques to disseminate information that would be beneficial in correcting the situation. The time for accepting change was optimal. The target audience was clearly defined. The pathologist served as an authority on the particular problem. Demonstrations showing how different varieties performed served to reinforce the need for change. A continuous, well-planned program resulted in the effective dissemination of the information. Several channels, including, photos, field days, and news articles, were used.

In contrast, the second example illustrates inadequate planning, poor timing, lack of a truly authoritative source, and a failure to persuade growers to stick with the practice more than one year.

The story is told of one change agent who frequently visited an old and wise gentleman in his community. Often he explained his plans and strategy and they discussed the proposals together. The old gentleman would finally offer his opinion, "Now is the time, or wait a while--the time is not yet right." Timing in communication is an essential consideration for accomplishing the purpose of the communication effort.

Definition of Timing

Timing, in this context, can be thought of as that time in a presentation or the development of a program that is the most opportune time for maximum benefit and efficiency in presenting information, and for reaping the maximum desired response from the audience.

CHAPTER III

EDUCATIONAL OBJECTIVES FOR TRAINING PROGRAMS

This chapter deals with the selection of educational objectives for training programs involving agricultural educators. Three primary sources have been used in reviewing alternatives in selecting the suggested educational objectives; i.e., (1) the nature and role of the job, (2) identification of communication concepts, and (3) suggestions from subject-matter specialists.

The objectives included herein are suggested as guidelines in considering general areas of intensive study in communication. Each individual instructor should decide on the most important areas for consideration and formulate the specific teaching objectives and learning experiences for the particular training program in which he may be involved.

Contemporary life, and future expectations for it, influence heavily the nature and role of the job of the adult educator in agricultural education. The study of the learner also is important, particularly at the stage of selecting or organizing learning experiences. His needs, interests, and levels of experience with material to be dealt with must be considered if optimum behavioral change is to be realized.

EDUCATIONAL OBJECTIVES

1. To understand communication as a dynamic process involving a number of concepts in action.

    a. Be able to construct a meaningful communication model that explains the various concepts of communication--source, message, channel, and receiver

    b. Explain those influences that affect the above-mentioned elements within the model.

2. To understand the importance of the concepts of communication in introducing educational change in agriculture.

    a. Be able to identify the relevant situational information needed for communication.

    b. Be able to identify educational problems through a situational analysis of the communication process.

    c. Be able to design educational experiences using the concepts of communication.

   d. Increase the ability to evaluate the effectiveness of the communication or the use of communication procedures.

3. To understand the concepts and principles of communication and their relationship to agricultural education.

   a. Be able to describe the educational role of agricultural education and its contribution to the total field of adult education.

   b. Be able to describe the role of the Agricultural Education communicator.

4. To understand the importance of the communicator in presenting valid information.

   a. Be able to state the purpose of the intended message.

   b. Be able to identify the needs and desires of the audience.

   c. Be able to identify the needed skills and competencies of the communicator.

   d. Be able to collect, organize, and present content that is meaningful and will give lasting satisfaction to the audience.

   e. Be able to identify and use the relevant concepts of communication in the development and delivery of a presentation for a specific interest area.

   f. Be able to evaluate the results of the communication.

5. To understand the sources of communication difficulties.

   a. Be aware of the dangers of misunderstood perceptions, mismatched experience, lack of credibility, misuse of communication channels, too strict control over the communication effort, role conflict, norm conflict, lack of attention to feedback, and informal network.

6. To understand the sender-receiver relationship in the communication process.

   a. Be able to state a philosophy of involvement of people in communication which is consistent with the principles of adult learning and the objectives of the organization.

   b. Become better listeners by seeking the useful and practical in every situation.

   c. Realize the importance of motivation as a factor in attaining interest and meeting needs of the audience.

   d. Recognize the importance of perception in communication.

7. To understand qualities desirable for communicators to improve the dissemination of information.
   a. Develop ability as a small group discussion leader.
   b. Develop ability to instruct and inspire persons on a person-to-person or mass basis.
   c. Be able to understand the value system of the group to be influenced by the communication.
   d. Be able to analyze the power structure in a group or institution.

SUGGESTED MATERIALS FOR EXPLAINING THE EDUCATIONAL OBJECTIVES

The material related to the various objectives previously mentioned is not intended to be inclusive. At best, it will suggest some of the major areas to be considered under each of the general objectives.

Objective I. To understand communication as a dynamic process involving a number of concepts in action.

The model given here is an example of one of the many models that could be illustrated.

Communication Process*

S______Encode______M________________C______Decode______R

SOURCE sends a MESSAGE through a CHANNEL to a RECEIVER

Source may be a	Message may seek to	Channel may be	Receiver may be
--person	--report	--speaking	--one person
--organization	--interpret	--writing	--small group
--government	--persuade (one or more of these)	--visualizing	--mass audience

WHO says WHAT through what CHANNEL to WHOM?
FEEDBACK the other half of S-M-C-R
--for what purpose?
--with what effect?
--in what situation?

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* This model was prepared by the Federal Extension Service of the U. S. Department of Agriculture. For other models of communication refer to Appendix B.

Objective II. To understand the importance of the concepts of communication in introducing educational change in agriculture.

Communication involves planning. Effective communication, like effective planning, can be accomplished best by keeping in mind the important steps to be considered. Two examples of organizing for communication effectiveness follow:

A. We begin by analyzing the problem, and then follow with gathering facts, organizing the facts, forming an outline, determining what is needed to convey our meaning, arranging it into interesting form, and adding human interest so as to motivate action. Then we may speak or write with assurance.[78]

B. 1. Situation analysis.

2. Problem identification.

3. Identify worthwhile educational objectives and change in practice that should be made.

4. Plan for communication:

   a. create a feeling of need in the clientele,
   b. state the problem,
   c. identify probable alternatives,
   d. list factors to consider,
   e. secure facts, and
   f. arrive at a decision to the problem,

5. Decide on the most effective channel or channels for disseminating the information.

6. Collect relevant information to support the facts and the decision arrived at.

7. Communicate the information to the target audience.

8. Follow through with person-to-person consultation and press for some action of an overt behavioral nature.

9. Allow for adequate feedback.

10. Evaluate the communication effort.

11. Make some general conclusion.

Objective III. To understand the concepts and principles of communication and their relationship to Agricultural Education.

Communication is closely associated with teaching and learning. Principles of communication resemble those of teaching and learning.

1. Communication is an essential part of Agricultural Education.
2. Planning is fundamental to communication.
3. Communication skills may be learned and improved upon.
4. The clearer, the more realistic and relevant the message, the more effective the learning.
5. We communicate best what we practice.
6. We communicate to report, to interpret, and to persuade.
7. There is a motivational factor in all communication.
8. We communicate best what is meaningful to us.
9. Most people never reach their potential in communicative effectiveness.
10. Guidance in how best to communicate is essential.
11. The communicator must have access to adequate, credible sources of material for effective communication to take place.
12. Appropriate standards of performance must be clear to the communicator.
13. Satisfaction must be derived from the act of communication.
14. The message being communicated should be appropriate to the level of education, interests, and experience of the learner.
15. The communication method used should be carefully considered from among the possible ways of transmitting the message.
16. Communication effects are a result of a number of forces of which the communicator can control only one--the message. Others are (1) situation in which the communication is received, (2) the personality state of the reveicer, (3) the receiver's relationship and standards.

Objective IV. To understand the importance of the communicator in presenting valid information.

The communicator, source, or sender of a message is essential for communication to take place.

Fortunately, there are some things a communicator can do to improve his credibility to an audience. A good communicator is characterized by the following:

1. He knows

   his objectives - has them specifically defined;
   his audience - needs, interests, abilities, predispositions;
   his message - content, validity, usefulness, importance;
   channels that will reach the audience;
   how to organize and treat his message; and
   his professional abilities and limitations.

2. He is interested in

   his audience and its welfare,
   his message and how it can help people,
   results of communication and their evaluation,
   communication process,
   communication channels - their proper use and limitations, and
   how to improve his communication skill.

3. He prepares

   a plan for communication - teaching plan,
   communication materials and equipment, and
   a plan for evaluation of results.

4. He has skill in

   selecting messages,
   treating messages,
   expressing messages - verbal and written,
   selecting and using channels,
   understanding his audience, and
   collecting evidence of results.[79]

Objective V. To understand the sources of communication difficulties.

There are three levels of communication problems commonly referred to as technical problems, semantics problems, and effectiveness problems.

1. How accurately can the symbols of communication be transmitted? (the technical problem)

2. How precisely do the transmitted symbols convey the desired meaning? (the semantic problem)

3. How effectively does the received meaning affect conduct in the desired way? (the effectiveness problem).[80]

Since many of the communication problems involve the channel, an understanding of the obstructions that can enter into the process at this point should be considered.

1. Failure of a channel to reach the intended audience.
2. Failure of a communicator to handle channels skillfully.
3. Failure to select channels appropriate to the objective.
4. Failure to use channels in accordance with the abilities of the audiance.
5. Failure to avoid physical distraction.
6. Failure to use a combination of channels.
7. Failure to use a series of channels.[81]

Objective VI. To understand the sender-receiver relationship in the communication process.

As in the case of the communicator, no communication can take place without a receiver. Good listening habits can be a great aid to learning. Good observing and reading habits are also essential to the receiver.

1. Good listening habits build the shortest line possible between you and what is new in the world.
2. Good listening habits provide us with the most comprehensive grasp possible of the information-charged world around us.
3. Good listening habits provide us with a means of supplementing and revising quickly, constantly, and efficiently our working fund of information and skill.
4. Good listening habits integrate our various traits and skills as we apply our talents to the problem of living.
5. Good listening habits provide us with natural and valuable depth to what we see.[82]

Perception is important both to the communicator and the receiver. The following principles help to explain the role of perception in communication:

1. We perceive best what we are prepared to perceive.

2. We can improve our efficiency as perceivers by giving attention to conditions which surround the act of perception and by acquiring good habits of perception.

3. The more we involve our sensory equipment in the act of perceiving, the deeper will be the impression we gain through perception.

4. All perceiving requires structuring by the mind to make that perception meaningful; hence, the more assistance you can give your mind to this task of structuring the more efficiently your mind can perceive.

5. Our senses sometimes mislead us; hence, we must guard ourselves constantly against sensory distortion.[83]

Objective VII. To understand qualities desirable for communicators to improve the dissemination of information.

The communicator is generally in control of the situation. He can be more effective by being attentive to the whole process.

1. The sender must have clear information.

2. The message must be encoded fully, accurately, effectively, and in a transmittable sign.

3. The message must be transmitted rapidly enough and accurately enough to prevent other competitive factors from interfering.

4. The message must be decoded in a pattern corresponding to the encoding.

5. The receiver must be able to handle the decoded message.[84]

The communicator must have something to say. The principles related to the message should be helpful in preparing and presenting a message.

1. The message must be so designed and delivered as to gain the attention of the receiver.

2. The message must employ signs which refer to experience common to both sender and receiver, so as to "get the meaning across."

3. The message must arouse personality needs in the receiver and suggest some ways to meet those needs.

4. The message must suggest a way to meet those needs which is appropriate to the group situation in which the receiver finds himself at the time when he is moved to make the desired response.[85]

5. A message is much more likely to succeed if it fits the patterns of understandings, attitudes, values, and goals that a receiver has; or if it at least starts with this pattern the communicator may try to reshape it slightly.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was designed to review materials related to communication and identify the major concepts. The concepts would be useful in developing a graduate-level course in communication geared toward improving the competencies and effectiveness of adult agricultural educators in introducing educational change.

The general purpose of this study was to identify, define, and operationalize the communication concepts required by adult educators in agriculture to fulfill their roles as educational change agents.

THE STUDY

The general design for the study was based fundamentally on the idea that in the initial step in the development of a comprehensive training program for professional workers, regardless of appropriate and valid objectives, two dimensions are paramount. First, the intellectural behavioral requirements of the job were identified. Second, relevant knowledge required to develop the intellectual behavior were identified and described as the basis for the development of the training program.

Four stages were envisioned, with each stage related to the objectives of the study. These stages were (1) determination of the anticipated behavioral requirements for future competence in communication: (2) identification of relevant concepts from behavioral science disciplines; (3) definition and description of the concepts; and (4) development of suggested educational objectives. Under each stage the proposed procedure was described, although these stages were not viewed as discrete stages, since there was a degree of interrelationship among them. The stages, therefore, were suggested to help achieve clarity in the procedural aspects of the study.

Specific Objectives

The following objectives were identified to facilitate the pursuit of this study:

1. to determine the anticipated intellectual behavioral requirements for future competence in communication;

2. to identify relevent communication concepts from the behavioral sciences;

3. to define and describe the concepts; and

4. to develop suggested educational objectives for use in staff development programs.

Assumptions

It was assumed in this study that (1) in general, present extension and vocation agricultural educators need increased levels of understanding of fundamental concepts related to communication as the basis for leading more effective programs; (2) communication is more effective if those involved understand the basic concepts; (3) subjective judgment made by authorities in the field of communication are valid evidence in determining priorities of relevant concepts; (4) the most important communication concepts do not remain static--changing times and situations will dictate those concepts most useful; and (5) there are some commonalities to all communication behavior.

Limitations

Limitations of the study recognized by the writer were (1) the procedure used to formulate grouping of the communication concepts was largely subjective in nature, (2) the study was conducted over the relatively short period of one year, and (3) the audience for the study was identified as cooperative extension and vocational agricultural educators in graduate and in-service training programs.

Sources of Information

A review of research reports and projections by experts in fields relevant to agricultural education was conducted and those relevant technical, social, and economic trends were reviewed to construct a list of changes which need to be effected in Agricultural Education to cope with these trends.

Based on this review, a list of anticipated intellectual behavioral requirements for future competence in communication was developed for educators in Agricultural Education.

An extensive review of literature written by authorities in the field of communication served to identify relevant communication concepts. These concepts were ranked in four groups, according to their importance, using the following screening process: (1) authorities in the field of Agricultural Education were contacted and asked to check those communication concepts most important to their respective fields, (2) the list of intellectual behavioral requirements was alternatively contrasted and compared to find out which communication concepts were most important as a part of the intellectual behavioral requirement, (3) situational analyses were used to identify communication concepts that were operating most strongly in the solution to the problem,

(4) concepts used in definitions of communication were considered, and (5) indexes of books on communication were consulted to determine important concepts.

As a result of this examination, four groupings of communication concepts were derived. The first three of these groups were given further consideration. Thirty smaller units, each of which represented a central idea, were constructed. The major concept or idea from each of these 30 groups was further explained by considering a situation in which the concept was known to be operating, showing the relationship of this concept to other communication concepts, defining the concept, and finally giving references that would prove helpful in further investigation.

Based on the definitions and explanations of the communication concepts, a list of educational objectives for training programs was suggested.

Finally, three consultants in the fields of communication, cooperative extension, and vocational agriculture, respectively, reviewed all aspects of the study and offered their suggestions for its improvement. These suggestions have been included in the final draft of the study.

Major Findings

An extensive review of the literature, related research, and the opinions of specialists in the fields of communication, cooperative extension, and vocational agriculture constitute the basis for the following summary of the findings of this study.

TECHNICAL, SOCIAL AND ECONOMIC TRENDS IN SOCIETY

It is impossible to predict specifically the consequences of possible developments. However, to refuse to consider possible developments, overwhelming technological, social, and economic changes will engulf our programs and force change without proper foresight and preparation or crush the remaining flicker of light they have to offer.

Specialization might be thought of as the key that unlocks the doors to a successful future. Specialized production, marketing, packaging, distribution, management, organization, leadership, and administration, aided by new and more specialized machines, will bring with it fewer but highly specialized job in applied fields and more jobs in service areas, especially areas related to solving social problems. Higher incomes for all, but especially for those highly trained, efficient individuals, will be in order.

The American economy will be responsible to world-wide economy and also dependent on it as travel, communication, and change of personnel, goods, and services become more abundant. The farm segment will continue to become increasingly dependent on other segments of the economy as cash substitutes for labor.

Mass education, large research and development laboratories, mass transportation, mass religion, mass recreation facilities, big business, and even small business will bring new problems and solutions but will increasingly operate in ways intended to maximize command and control of predictability and stability on a world-wide basis.

CHANGES NEEDED IN AGRICULTURAL EDUCATION

Extension education, irrespective of the agency sponsoring it, will need to place its emphasis on education using a "rifle approach" well levelled at different clientele using different approaches.

An objective presentation of facts from a credible source will become increasingly important as more companies provide services with their products. Specialized training for specialized audiences, including personnel concerned with extension education, will be essential in greater depth at more frequent intervals.

Organization will need to change with the increase in population which will result in increased numbers of clientele to be served. Greater experimentation will cooperation among agencies, each relying on the others' specialties to effectively solve yet unrecognized problems.

INTELLECTUAL BEHAVIORAL REQUIREMENTS

The anticipated intellectual behavioral requirements for future competence in social change were the result of a careful review of relevant technical, social, and economic trends in society and the trends needed in agricultural education. A summarized listing of these requirements is included in the first chapter of this report. For a complete listing refer to Appendix A.

CONCEPT IDENTIFICATION

Of approximately 175 concepts identified in the literature, 27 passed four tests in the screening process and were classified as being most important.

Twenty-five concepts were classified as being of much importance and 72 as being important. The remaining communication concepts identified were classified as being interesting possibilities for future study.

Within the first three groups many of the words referred to the same concept; i.e., receiver, audience, publics, target audience. As a result of this duplication a further regrouping resulted in 30 more distinctive units, with each unit representing one broad idea or concept. Most of the key words denoting concept units have been included in group one. Group two and group three generally served to support those concepts in group one.

The explanation of the 30 major concept units showed the use of many of the communication concepts in the majority of situations in combination with the major concept being explained. Those concepts in group four (lesser importance) were also found fewer times in the situations explaining the major concepts.

The communication concepts rated most important include affective behavior, attitudes, channel, content, credibility, experience, feedback, information, interest, listening, medium, message, motivation, perception, persuasion, process, purpose, reading, receiver, response, sender, social cultural system, source, speaking, stimulus, target audience, and timing.

The major concepts in each of the 30 groups can be designated by the following words: affective behavior, attitudes, authority, capability, channel, commitment, credibility, divisibility, experience, fidelity, frequency, informal, information, interest, interpretation, language, message, needs, perception, planning, persuasion, primacy, process, purpose, reality, reinforcement, response, sender, social cultural system, and timing.

EDUCATIONAL OBJECTIVES FOR TRAINING IN COMMUNICATION

The educational objectives were developed with information derived from three primary sources; i.e., (1) the nature and role of the job (2) the identification of communication concepts, and (3) suggestions from subject-matter specialists. A complete listing and explanation of these educational objectives is included in the second chapter of this report.

CONCLUSIONS

The following conclusions are based upon evidence from the study.

1. The study of technical, social, and economic trends, and the connected changes needed in adult agricultural education, was an effective way of determining those anticipated intellectual behavioral requirements needed for futrue competence in communication.

2. The identification of concepts from communication literature was an effective way of organizing a wealth of material in the field of communication. The relevance of these concepts to the intellectual behavioral requirements holds tremendous possibilities for determining the usefulness of any subject-matter field to a particular job.

3. The process of defining and describing the communication concepts proved successful in determining a small number of concepts as being most important to the adult educator in agriculture.

4. The identification of suggested educational objectives for training programs served as a guide to teaching the concepts for the efficient development of programs and communication efforts on behalf of the adult educator in agriculture.

RECOMMENDATIONS

1. The intellectual behavioral requirements identified should be used as guidelines to provide purpose, meaning, and direction in developing materials for teaching for personnel in these categories.

2. Graduate-level courses in communication for adult educators in agriculture should include the most important concepts identified in this study.

3. In-service programs for adult educators in agriculture should be developed using the most important concepts as one basis for program development.

4. The educational objectives and the materials presented should provide a beginning point for an instructor as a course in focus on what appear to be the most critical areas. As the instructor develops a course he may well modify these objectives further.

SUGGESTIONS FOR FURTHER STUDY

1. A continuation of this study would be rewarding. The concepts identified should be tested to determine their relative importance. This study was concerned with the first phases of a continuing plan; i.e., situation analyses, concept identification, and possible objectives. The next stage would be concern with a trial; i.e., development of a plan or curriculum, teaching, determining the progress, and reconsideration of the approach.

2. Other fields concerned with adult education, such as psychology, sociology, and philosophy, should examine this procedure as a way of synthesizing a wealth of material to focus on one or more specific problems or areas included in their field.

3. Some synthesis of all these materials from the various fields should be attempted to form a block of concepts in the social and behavioral sciences that would be considered essential for the adult educator in agriculture to improve his efficiency as an educator and change agent.

APPENDIX A

INTELLECTUAL BEHAVIORAL REQUIREMENTS

The specification of the anticipated intellectual behavioral requirements for future competence in social change were determined by reviewing the relevant technical, social, and economic trends in society and the trends needed in cooperative extension and vocational agriculture education. The effective vocational agriculture teacher or the cooperative extension agent.

1. possesses an educational and social philosophy that is consistent with the expectations of contemporary society, the Cooperative Extension Service, or Vocational Agricultural Education and other authorities in adult and continuing education;
2. understands the social organization within which the county extension agent and vocational agriculture teacher function and the influence of technological, economic, and social forces on its evolution;
3. understands the role of the Cooperative Extension Service or Vocational Agriculture Education and related educational institutions in facilitating social, economic, and cultural adjustments required by individuals and groups to effectively cope with the consequences of rapid technological developments;
4. understands his role as a professional educator and the relationship of his role to others in his profession and related organizations;
5. acquires and utilizes a unified formulation of a theory of learning;
6. understands the processes of social change;
7. understands the processes of curriculum development--is prepared to work with technicians and with teaching aids;
8. understands technical subject matter appropriate to his job and is knowledgeable about reliable sources of information;
9. values and actively pursues continuing study as an essential factor to his continued professional growth;
10. knows the sources of pertinent economic and social data needed to effect an educational program, and is proficient in the collection, analysis, and interpretation of these data;

11. effectively identifies, organizes, and develops the human and technical resources needed to plan, execute and evaluate area, county, or community programs;

12. interprets with leaders and other appropriate persons the influence of technological, economic, and social factors in relation to forces operating within society and their impact on the individual, family, group, and community in society;

13. helps people (groups and individuals) invoke the decision-making process in determining problems, needs, and opportunities; establishes objectives and selects a course of action, and provides learning experiences to meet their specialized needs;

14. prepares a long-term program (plan, curriculum) based upon decisions arrived at jointly by both professionals and lay leaders;

15. diagnoses problems comtained in the program statement in order to identify specific problems encompassed within major problem areas: determines causal factors contributing or associated with each of the specific problems, and sequentially orders the specific problems based upon the stage of the clientele group in the learning process;

16. identifies and characterizes audiences to be reached as reflected in the identified problems;

17. formulates objectives for each of the specific problems in terms of the learners (audiences) and behavioral change to be achieved;

18. identifies and organizes learning experiences appropriate to the objectives for the identified audiences and used the problems identified;

19. selects channels of communication needed to provide stimulation for learning to occur, including new media such as computer, lcosed-circut television, and programmed systems of instruction;

20. determines the human and material resources needed to provide learning experiences for the several groups of learners, including units of instruction for (a) non-agricultural occupations and for (b) non-vocational oriented clientele;

21. identifies and obtains the cooperation of appropriate resource persons to assist in providing the needed learning experiences, works effectively and in a meaningful way in team work and in flexible programs;

22. plans and conducts educational experiences for resource persons and leaders in order to assist them to acquire needed competence;

23. maintains effective vertical and horizontal communication channels with various leaders, resource persons, and relevant professionals in the actual planning, execution, and evaluation of the program--uses "lay" advisory committees and agricultural industry personnel;

24. develops plans for evaluating program accomplishments in relation to defined educational objectives and the several developmental processes;

25. identifies, collects, and interprets evidence with respect to program objectives and learning experiences;

26. informs professional colleagues, leaders, public officials, and his several publics of program accomplishments;

27. utilizes findings of evaluative studies as a basis for strengthening and/or redirecting program efforts--has an eye to future needs and is teaching to meet those future needs.*

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* Note: The following papers were used extensively in formulating this list of intellectual behavioral requirements.

E. H. Quinn and E. J. Boone, "A Role Model of the County Extension Agent," mimeograph, presented to the National Extension Curriculum Seminar, Asheville, North Carolina, August, 1967.

Lloyd J. Phipps, "Emerging Approaches to the Professional Education of Teachers of Agricultural Occupations," mimeograph, presented to the National Vocational-Technical Teacher Education Seminar, Chicago, September, 1967.

APPENDIX B

DEFINITIONS AND MODELS OF COMMUNICATION

Simply stated, communication is the sharing of ideas and feelings in a mood of mutuality. It is a two-way process. Communication at its best is an interaction, a transaction, a situation in which modification of one's ideas is a logical and often necessary part of the process. Communication means getting into the other fellow's shoes, and permitting him to get into ours. It means an empathic relationship, sensing the way a given idea or experience affects other persons.[86] It is the bridge which unites the producer of information with its users.

Various definitions given by communication experts support this central idea of interaction. It is the hope of the writer that the following definitions and models will aid the reader in more clearly understanding communication.

A more comprehensive look at the various definitions given by communication experts would seem helpful at this time.

> Communication is: (1) the transference of thoughts from one person to another through the medium of speech or writing, including the use of mechanical instruments such as the telephone and the radio, (2) a term increasingly used, in a general sense, to embrace a wide range of instruments, mediums, and processes - as in technical communications, studies in social and psychological processes of mass communications, and statistic and linguistic processes in communication arts.[87]

> In a broad sense, communication is any art by virtue of which one organism evokes behavior from another --- intentional communication --- means the use of symbol behavior that not only triggers others' behavior but does so with the initiator usually able to anticipate the nature of the reaction to his behavior.[88]

> Communication comes from the Latin communis, common. When we communicate we are trying to share information, an idea, or an attitude --- the essence of communication is getting the receiver and sender "tuned" together for a particular message ---- Communication always requires at least three elements - the source, the message, and the destination. A source may be an individual (speaking, writing, drawing, gesturing) or a communication organization (like a newspaper, publishing house, television station or motion picture studio). The message may be in the form of ink on paper, sound waves in the air, impulses in an electric current, a wave of the hand, a flag in the air, or any other signal capable of being interpreted meaningfully. The distination may be an individual listening, watching, or reading; or a member of a group, such as a discussion group, a lecture audience, a football crowd or a

mob; or an individual member of the particular group we call the mass audience, such as the readers of a newspaper or a viewer of television.[89]

--- sharing lies at the heart of the word communication. When people are in communication, they make common or share their ideas and feelings. The process of sharing ideas and feelings implies a number of elements - a communicator and a receiver of that communication; some kind of purpose and expression on the part of the communicator; some kind of perception, interpretation, and response on the part of the receiver, some kind of bond or channel linking the communicator and the receiver of that communication, and some kind of occasion or living situation in which the communication occurs. --- In taking a first sophisticated view of the what, how, why, when, and where of communication, it is important that we see this subject in full process, for only when we see the process of life are we looking at the whole of communication.[90]

Aristotle defines the study of rhetoric (Communication) as the search for all the available means of persuasion.[91]

Communication is a process of sharing experience till it becomes a common possession. It modifies the desposition of both the parties who partake in it. Normal communication with others is the realistic way of (bringing the nature of an experience to have implications) effecting this development, for it links up the net results of the experience of the group and even the race with the immediate experience of an individual. By normal communication is meant that in which there is a joint interest, a common interest, so that one is eager to give and the other to take. It contrasts with telling or stating things simply for the sake of impressing them upon another, merely in order to test him to see how much he has retained and can literally reproduce.[92]

Communication is the process of transmitting meaning between individuals, --- mass communication is a special kind of communication involving distinctive operating conditions, primary among which are the nature of the audience, of the communication experience, and of the communicator.[93]

Communication is the transmission of information, ideas, emotions, skills, etc., by the use of symbols - words, pictures, figures, graphs, etc. It is the act or process of transmission that is usually called communication.[94]

Communication is a process, and process implies something ongoing dynamic, and ever changing. We are not only sources or receivers of communication. We are both, and in our daily lives we constantly switch from one role to the other. We send messages and at the same time we receive messages.[95]

Communication is (1) the transmission of an effect from one place to another without transport of material: e.g., a sound wave transmitted from its origin to the ear drum, (2) the process whereby physical energy acts upon a sensory receptor: a stimulus is communicated to an organism.[96]

Effective communication means tailor-made programming specially designed for the situation, time, place, and audience.[97]

The extension agent fails to communicate when he concentrates only on subject matter and forgets the audience. The goal or end of communication is the widest sharing of the good things and ideas of life. The means are all those ways by which ideas are transferred, but with chief emphasis on the person, not the medium or the material.

The communication process can be thought of as any communication act, whether it be a face-to-face relationship or via mass media, as beginning with an idea, a concept or proposition in the mind of the communicator. The idea is then encoded into audible and visible communication symbols to be transmitted by light and sound waves or through some form of printed medium as its channel. The receiver is an individual reader, listener, or observer who decodes the symbols into terms meaningful to him, and the communication reaches his mind through one of the senses and elicits some kind of response. This rēsponse, if overtly expressed, serves as a "feedback" to the communicator.

For example, the extension agent preparing a lesson for his audience has as his purpose to teach certain facts or principles. He takes the information, decodes it, and brings these thoughts and this information together; that is, encodes it through writing, or speaking. The channel may be a mimeograph, film strip, or sound waves. The student receives the message, decodes it by retranslating it into a nervous impulse, and sends it to the impulse with a resulting response to the stimulus.

Robinson (Fig. 1) suggests that the sender, in receiving and collecting information (decoding), is making sense out of this information (assigning meaning) and developing and executing a communications program consistent with this gathered and interpreted information (encoding). This process is described as a circular one, out of which one cannot really seperate (except for analysis of purpose) the three functions of decoding, assigning meaning, and encoding.[99]

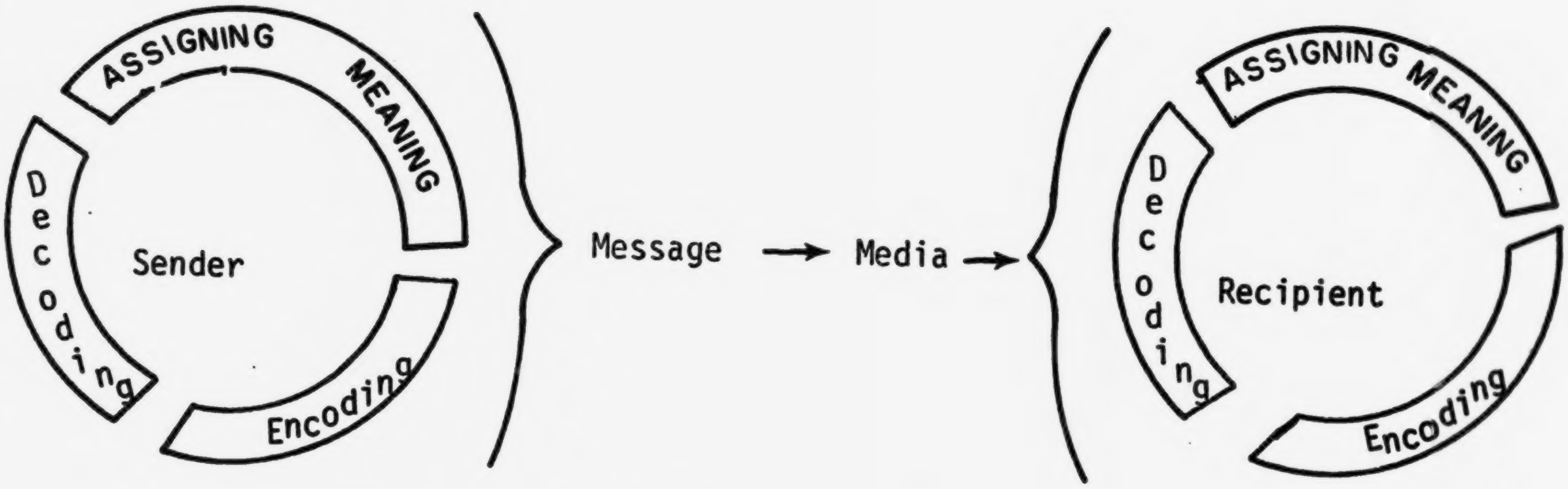
ASSIGNING MEANING
Decoding
Sender
Encoding
Message
Media
ASSIGNING MEANING
Decoding
Recipient
Encoding

Fig. 1 - Circular process of the three functions of decoding, assigning meaning, and encoding.

Schramm (Fig. 2) indicates that communication is highly dependent on the field of experience of both the source and the receiver. The more the two have in common in the way of experience the easier and the more effective the communication will be.

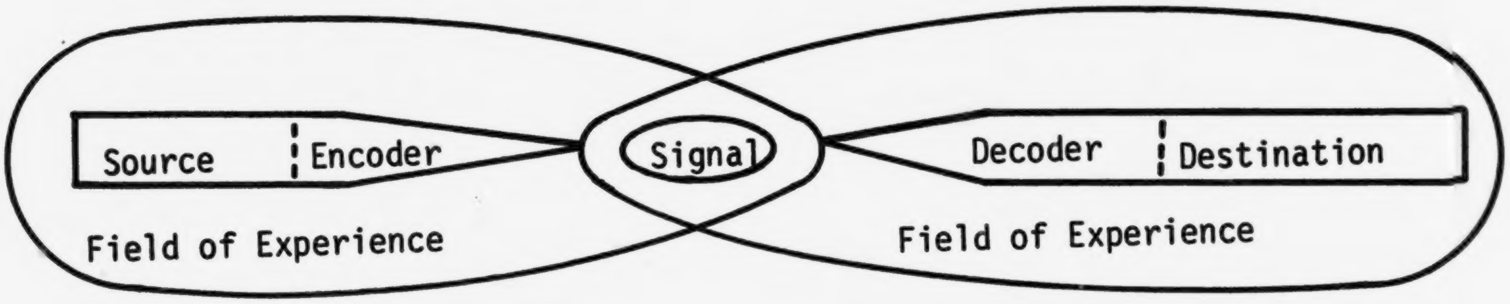
Source
Encoder
Signal
Decoder
Destination
Field of Experience
Field of Experience

Fig. 2 - The importance of common experience for effective communication.

The source can encode and the destination can decode only in terms of the experience that each has had.[100]

Yet another way that the process can be diagrammed is shown in Fig. 3.

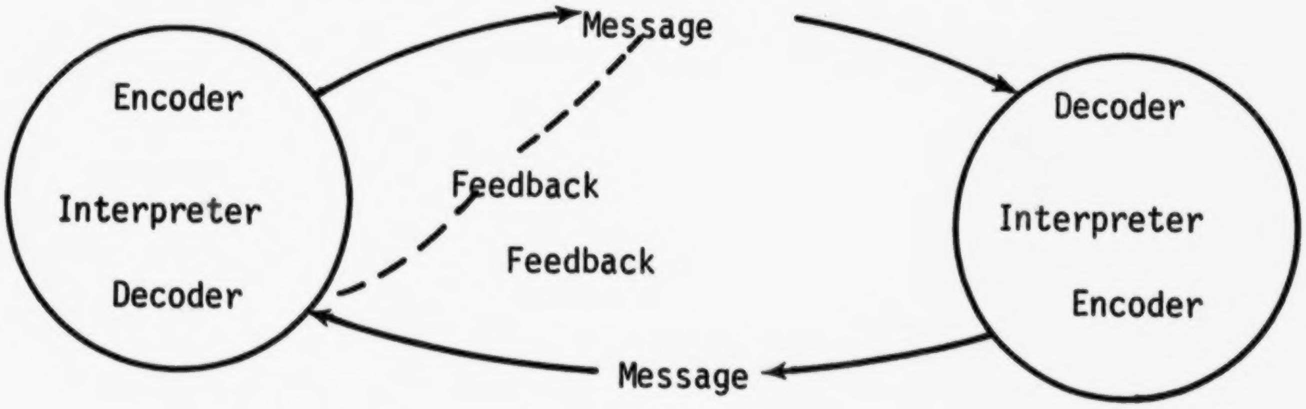

Fig. 3 - The relationship of feedback to the communicator.

An experienced communicator is attentive to feedback, and constantly modifies his message in light of what he observes in or hears from his audience.[100]

Knower suggests a more detailed model that includes many of the concepts discussed in this paper. Some of the contributing disciplines concerned with communication are indicated in the margin of the model. Any communication is shaped by the culture in which the behavior occurs. Speech is an example of learned behavior affected by culture, but differences do occur reflecting the change that takes place over time. The principal features of this model are on a pedestal with a base labelled learning implying that all communication behavior has been learned.[101] This model is shown in Fig. 4.

Berlo treats the process a little differently when he suggests the following sequence:

Source Encoder Message Channel Decoder Receiver

Berlo states that the source and the encoder are often the same person. Similarily the decoder and the receiver may be the same person. Since it is a process, it is impossible to separate one part exclusive of all others for the purpose of examination.[102]

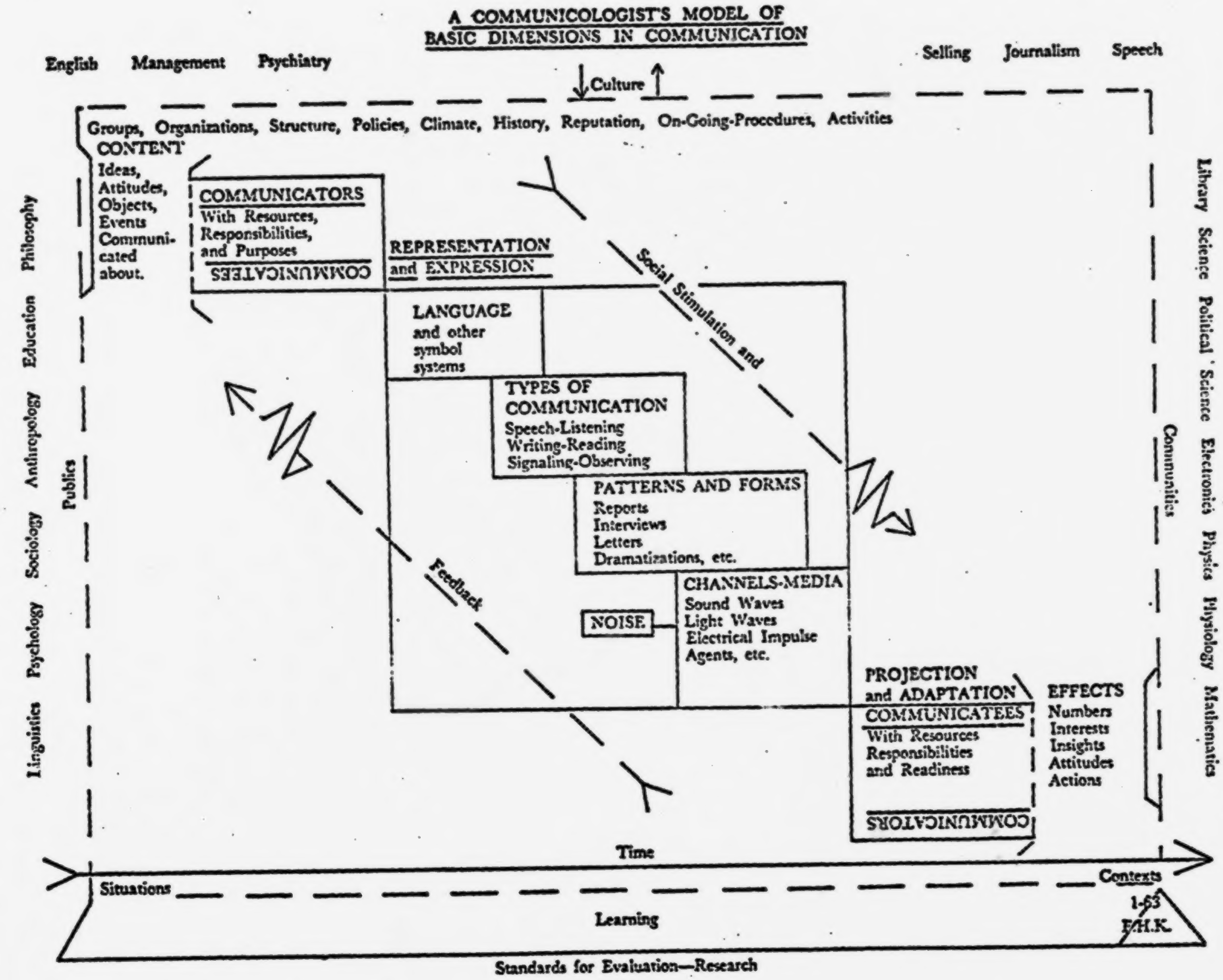
A COMMUNICOLOGIST'S MODEL OF
BASIC DIMENSIONS IN COMMUNICATION
English
Management
Psychiatry
Selling
Journalism
Speech
Culture
Groups, Organizations, Structure, Policies, Climate, History, Reputation, On-Going-Procedures, Activities
CONTENT
Ideas, Attitudes, Objects, Events Communicated about.
COMMUNICATORS
With Resources, Responsibilities, and Purposes
COMMUNICATEES
REPRESENTATION and EXPRESSION
LANGUAGE and other symbol systems
TYPES OF COMMUNICATION
Speech-Listening
Writing-Reading
Signaling-Observing
PATTERNS AND FORMS
Reports
Interviews
Letters
Dramatizations, etc.
CHANNELS-MEDIA
Sound Waves
Light Waves
Electrical Impulse
Agents, etc.
NOISE
Social Stimulation and
Feedback
PROJECTION and ADAPTATION
COMMUNICATEES
With Resources
Responsibilities
and Readiness
COMMUNICATORS
EFFECTS
Numbers
Interests
Insights
Attitudes
Actions
Philosophy
Education
Anthropology
Sociology
Psychology
Linguistics
Publics
Library Science
Political Science
Electronics
Physics
Physiology
Mathematics
Communities
Time
Situations
Contexts
Learning
1-63
F.H.K.
Standards for Evaluation—Research

Fig. 4 - Some important communication concepts

Another model, shown in Fig. 5, is interesting in that it suggests that the message may indeed change from the time it leaves the sender until it comes back to the sender again.[103] The game of passing a story by whispering from one to another around a circle illustrates the point. By the time the story reaches the original sender again its content is likely to have changed considerably.

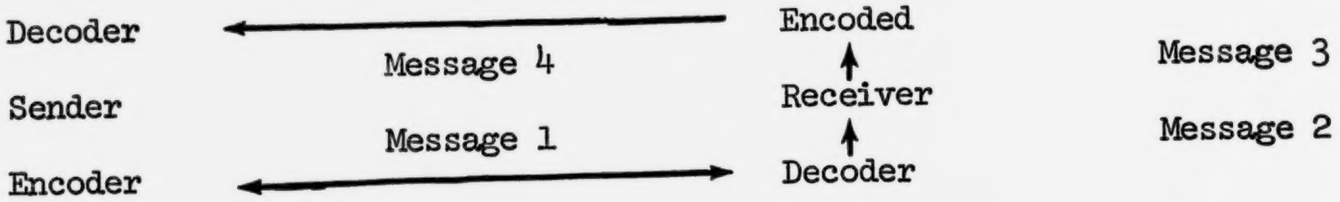
Decoder
Sender
Encoder
Message 4
Message 1
Encoded
Receiver
Decoder
Message 3
Message 2

Fig. 5 - The circular dimension in communication

The Shannon and Weaver model (Fig. 6) begins with an information source prepared to send a message. The message must then be put upon a mechanism capable of encoding and sending it. The signal passes over a channel to a receiver mechanism. Here the message is decoded and forwarded to its destination for possible action. Noise is an outside force that distorts the message.[104]

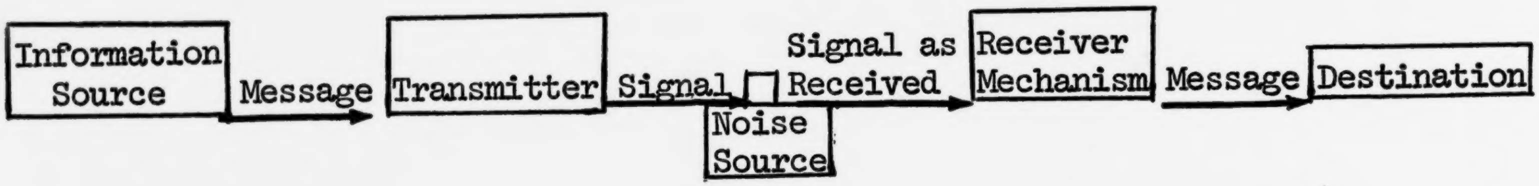
Information Source
Message
Transmitter
Signal
Signal as Received
Noise Source
Receiver Mechanism
Message
Destination

Fig. 6 - Shannon and Weaver model of communication

Other models have been suggested by Smith who reviews some 20 communication models with different theoretical and subject matter orientation.[105] McLechlan presents his analysis in seven typical communication structures: the cocktail party, the rural community, the military organization, a team for useful scientific research, the netword on teaching, the telephonic networks, and information retrieval systems.[106]

He points out the diffusion potential of those different communication structures and their mode of "monitoring" information -- monitoring being defined as a system of controls over the types of information sent from the various centers.

Recently more and more research has been centered around the "Two-Step Flow of Information" hypothesis. There seems to be not doubt that between the media and the audiences there are the opinion leaders who bring small groups in touch with relevant parts of the environment through appropriate media.[107]

Rogers and Capener suggest a special kind of the two-step flow of communication, that of the trickle-down process. Whereas the concept of the two-step flow of communication is that "ideas" often flow from radio and print to the opinion leader and from them to less active sections of the population, in the trickle-down process the adoption leaders (for farm innovations) secure their technical farm information from the county Extension Agent and then pass this information along to their neighbors and friends as personal influence or work-of-mouth communication.[108]

Berlo takes into consideration variations in Sources, Messages, Channels, and Receivers in acts of Communication.

> Sources and Receivers are seen as having specific (i) communication skills, (ii) attitudes, (iii) knowledge; and as belonging to particular (iv) social systems and (v) cultures. Communication Messages are viewed as having different (i) elements, (ii) structure, (iii) contents, (iv) treatments and (v) codes; and Channels are seen relating to (i) seeing (ii) hearing, (iii) touching, (iv) smelling, and (v) tasting.[109]

Many beleive that the mere existence of widely spread and elaborate communication networks and consumption by adopters or adopter systems of information flowing over them leads automatically to the adoption of innovations. However, most communication specialists agree that some generalized interaction mechanism must be brought into existence to influence adopters to accept new concepts, attitudes, or tools.

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TITLE

COMMUNICATION CONCEPTS FOR DEVELOPING INCREASED COMPETENCE AMONG COOPERATIVE EXTENSION AND VOCATIONAL AGRICULTURAL EDUCATORS IN IMPLEMENTING EDUCATIONAL CHANGE

PERSONAL AUTHOR(S)

Robert W. McCormick, et. al.

INSTITUTION (SOURCE)

The Ohio State University Research Foundation, Columbus, Ohio

SOURCE CODE

REPORT/SERIES NO.

OTHER SOURCE

SOURCE CODE

OTHER REPORT NO.

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SOURCE CODE

OTHER REPORT NO.

PUB'L. DATE 2 _68 _

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PAGINATION, ETC.

105 pages

RETRIEVAL TERMS

*communication concepts, *educational change in agriculture

*implementing social change *adult education

*vocational education *adult education needs.

*extension education

IDENTIFIERS

ABSTRACT

The study identified major communication concepts needed by adult educators in agriculture to be effective in implementing educational change.

A list of 175 concepts was identified from the literature and from communication specialists. Twenty-seven concepts passed four screening tests and were classified as most important to adult educators in agriculture. These major concepts were applied through situational analysis of critical incidents of adult educators in agriculture. This process identified the relevance of the concept to the intellectual behavior requirements of the change agent. In addition, the relation of the major concept to other communication concepts was described and the concept was clearly defined.

Suggested educational objectives were identified for graduate and in-service educational programs for adult educators in agriculture.